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## SOME REFLECTIONS ON SO-CALLED INTESTINAL TOXÆMIA AND ITS BEARING ON THE SURGERY OF THE LARGE INTESTINE.

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### Intestinal Intoxication.

We now approach the second division of our subject, so-called intestinal intoxication, and what strikes us at once is the paucity of positive data available, and how meagre is anything like definite knowledge on the subject. We know not what intestinal intoxication means, or what symptom it might be expected to cause. We are ignorant as to whether the process is an infection by pathogenic organisms, or an intoxication by saphrophytes, or an absorption of abnormal products of digestion, and even if we grant that such infections and such intoxications and such absorption do occur we know that there are lines of defence possessed by the body such as the resistance of the intestinal epithelium, the antitoxic properties of the liver, and the bactericidal power of the blood.

The only conceivable agents in the alimentary contents that could produce so-called auto-intoxication may be reduced to three classes, namely, (a) the products of enzyme digestion, (b) those of bacterial digestion, (c) ectotoxins derived from pathogenic intestinal bacteria.

With regard to the products of enzyme digestion it is difficult to sustain the charge. Taking the products of proteid digestion, it is well known that though peptones and primary proteoses are dangerous and toxic when they gain entrance directly into the tissues such as by intra-venous injection, yet that in their passage through the intestinal wall they are elaborated and rendered harmless, and what is remarkable is that the further the process of hydrolysis is carried the less toxic they become, the toxic effect diminishing as the size of the molecule decreases. Besides the symptoms of direct entrance to the tissues of a foreign proteid have nothing in common with those that are alleged to arise from intestinal intoxication; they are of a totally different order which we need not stop here to discuss. As far as we know, the products of disintegration of carbo-hydrates and fats are no more capable of producing the alleged symptoms. It is true that those carbo-hydrates that escape absorption undergo acid fermentation from organisms present in the gastro-intestinal tract.

And this brings us to the next enquiry: Is the condition due to the products of bacterial digestion? Almost all the knowledge we have on this portion of our subject is due to the investigations of the late Dr. Herter, of New York, and Mechnikoff. The latter, in a series of papers in the "Annales de l'Institut Pasteur," discusses the subject at considerable length. Suffice it for our present purpose to state:

(a) that he assigns the chief role in what he calls "intestinal putrefaction" to certain anaerobic flora (b. perfringens, b. sporogenes, and b. putrificus); (b) that he devotes almost all his energies to the investigation of the toxic action of indol and yet indol is formed only to small extent by these anaerobic flora. So that it does not require a skilled bacteriologist to detect flaws in his chain of reasoning, or to show that he is anything but convincing. Thus it is well known that indol is derived from the tryptophane element in the protein molecule, and that the chief agents in splitting up tryptophane are not so much anaerobes, but a totally different group, the coliforms. Why indol, which is only one reduction product of the aromatic series, should be singled out is not clear. Lastly, how far its ethereal sulphate indican in the urine is a measure of intestinal putrefaction is very doubtful, since we cannot form any idea of the amount of total paired sulphates from the amount of indicanuria alone, nor would it be proper to single out indicanuria as the sole object of treatment, since it is connected with other conditions. Such is the foundation—how unstable you see—on which fascinating but empty hypothesis have been erected. You realise, too, how far from convincing is the work of his assistant, Distaso, who makes periodic visits to Lane's clinique, and obtains material from Lane's cases before and after operation, and seems to satisfy himself that there is a change of flora after operation from the culture reactions of the faeces on potato as a medium on the one hand, and on broth containing boiled white of egg on the other. When the faeces was inoculated on the former medium marked acid formation took place, due to acidogenic organisms (b. bifidus and b. acetogenes), while when the same faeces was inoculated on the broth and egg medium only rarely was it followed by proteolysis indicating an action on the part of the putrefactive organisms. The ordinary trained mind here again, although not specially skilled in bacteriology, will say "pass" to the facts, but will deny, at least will not admit, the inference that the function of the flora in the living body, can be solved by such a rough and ready test. So much for Metchnikoff and his disciple. Neither can the work of the late Dr. Herter, nor its continuation by Newburgh and Wooley, be said so far to be productive of much tangible results. Their researches, like those of Metchnikoff, largely centred round the disintegration products of the aromatic group of the proteid molecule. Thus Herter considered that indol, when it got into the circulation, caused some of the more important symptoms of constipation, such as headache, lack of physical and mental energy; but even if we admit that the principal symptoms in simple constipation are due to indol, and allied bodies, it is a far cry to implicate the large intestine. Why: because in the first place comparatively little of the antecedents of indol, enter the large intestine at all, except in cases

of deficient pancreatic digestion. When the food contents reach the ileo-caecal valve over 90 per cent. of the proteids are digested and absorbed, there remains relatively little to pass to the large intestine. If there is little proteid there must be little of the aromatic group (tyrosin and tryptophane) and of their derivatives indol, skatol and phenol. Secondly indol and skatol are not easily absorbed from the large intestine. On the other hand it is a well-known clinical fact that when obstruction, especially the acute form occurs in the proximal portion of the small intestine, there is a marked excretion of indican in the urine. This is used as a rough test between obstruction in the large and small intestine, and we have the authority of Nothnagel for stating that if no indican can be found in the urine the obstruction cannot be in the small intestine. Therefore, if the large intestine plays a part at all in indol absorption it is only a very secondary part. We can conceive that stasis or delay of contents in the large intestine for days may delay the contents in the ileum, and so favour the disintegration of the aromatic group into indol and its allies in the ileum, and absorption therefrom. To this interpretation there is the difficulty that the putrefactive bacteria which carry the splitting of the aromatic group to the stage of indol, phenol and skatol are generally located on the distal side of the ileo-caecal sphincter, but of course in delayed peristalsis in the large intestine these bacteria may, as it were, go up stream. I have tried to place impartially before you what is actually known on the nature of the products of bacterial activity on our food stuffs and you see how meagre it is. You realise how vague and indecisive is the evidence for implicating the colon in so-called intestinal intoxication.

We now arrive at the third and last conceivable agent in the alimentary contents of intestinal intoxication, namely, that produced by the split products of the bacteria themselves, or by their exotoxins. There are, as you know, two kinds of toxins that may be generated by bacteria namely (a) an exotoxin that is a substance produced by the interaction of a bacterium on its culture medium, e.g., Koch's T.O.; (b) an endo-toxin, such as an extract of the crushed bacterium itself, e.g., Koch's T.R. Now, the great mass of the intestinal flora is constituted of the three following groups: (a) the coliform group, (b) the streptococci, and (c) anaerobic bacilli. Every plate culture shows that there are other organisms present, but as they are in small numbers they do not here concern us. It is well known that neither the coliform group nor the streptococci produce any exotoxins—if they do they are not so far recognisable. Sterile filtrates of their cultures injected intra-abdominally into guinea-pigs give no evidence of any effect of the injection other than those of slight irritation. If either of these groups therefore cause symptoms of intestinal intoxication it must be due to the disintegration, chemical cleavage, and setting free of their split products, but we know from the able researches of the Vaughans (father and sons) that the cleavage products of bacterial cellular substance cause symptoms of a totally different order, namely such as

those proposed by peptones and proteoses, or those set up by the entrance parenterally of any foreign proteid. There is thus very little evidence against the products either of the coliform group or of the streptococci being the cause of intestinal intoxication. With regard to the remaining group, the anaerobes, any definite knowledge regarding them is very imperfect. Herter considers that they are greatly increased in irritative conditions of the lower bowel, and certainly in a case of intractable mucous colitis recently under the writer's care, the symptom complex at the time, its subsequent course and cure, would cause one to think on Herter's views in seeking an explanation for the condition. A detailed examination of the urine and faeces by Dr. Chapman showed marked protein putrefaction. There was no stasis; quite the reverse, an intractable diarrhoea.

It may be well in this connection to recall a few facts concerning germ destruction. A considerable portion of the faeces is made up of the dead bodies of germs. Strasburger estimates that an adult person living on an easily digested food excretes daily the skeletons of nearly 128 billion germs, and that one-third of the weight of the dry faeces consists of dead excreted bacteria. It follows from this that germ destruction occurs somewhere in the intestine on a rather large scale. This is altogether against any theory of chemical cleavage. The bacteria are not split up or disintegrated, they are killed. We may here direct attention to an important general principle in intestinal putrefaction, namely, that the end products of bacterial activity tend to inhibit bacterial growth. Thus, in the case of each of the two aromatic bodies, "tyrosin and tryptophane," around whose products centre most of what has been written on intestinal putrefaction from the chemical standpoint, it will be noted that the end product is phenol (tyrosin yields phenol compounds, while tryptophane yields indol and skatol, and indol can be further disintegrated into phenol).

We now realise how weak is the evidence for assigning intestinal toxæmia either to the products of enzyme digestion, bacterial digestion, or to those of the bacteria themselves. But even if we had definite information capable of identifying any of these as the cause, our difficulties would not then be at an end, for before the toxæmia could reach the general circulation it may be profoundly altered in its passage through the liver. Not the least of the functions of this organ in metabolism is to protect the economy from injurious substances, absorbed from the intestine. And when an intermediate product of normal metabolism is excreted in the urine it is probable that hepatic insufficiency is the cause rather than the intestinal mucosa. And therefore before assigning any symptom complex to intestinal toxæmia, we should be in a position of stating that the liver is capable of playing its normal part in distoxication, otherwise for all we know it may be an "hepatic" rather than an intestinal toxæmia.

The difficulty of assessing the respective roles of the liver and alimentary canal in toxæmia is nowhere better illustrated than in the case of cir-

hosis of the liver. The belief has been widespread that it was always due to alcohol, yet it is now known that it occurs in some who have never taken alcohol, such as Brahmins and other high-class Hindus, and in children—that it does not occur in every person who does take alcohol, nor is it so frequent among drunkards as is usually assumed. Thus, in 250 autopsies on confirmed drunkards, Formad only found cirrhosis in six. It is a trait in some conditions not related to alcohol in any way, e.g., the cirrhosis anthracolica, that occurs in coal-miners and workers in copper. How are we to explain these incongruities and yet account for the undoubted association between alcoholism and cirrhosis. It is evident that other factors than the ingestion of alcohol can give rise to cirrhosis, also that a predisposition, a want of resistance on the part of liver, innate or acquired to the action of alcohol, is perhaps even of greater importance than the alcoholism itself, and that even in those vulnerable livers that it has no specific action except what it produces in the experimental animal—fatty degeneration. It probably gives rise to cirrhosis indirectly, or as secondary condition, because, acting as a cellular poison on the liver cells, it inhibits their function of detoxication, and rendering them incapable of protecting the economy from deleterious substances absorbed from the intestine. These substances are then free to produce cirrhosis. The possibility of cirrhosis being definitely due to micro-organisms has to be remembered—from analogy it is not improbable. It is as you see difficult to state whether it is a "hepatic" or an intestinal toxæmia.

Methinks I hear someone say there is one stone you have not turned yet in the search for the source of intestinal toxæmia, namely, the intestinal mucosa itself. The reminder is all the more appropriate in view of the recent work of Stone, Bernheim and Whipple in their experimental study of the toxic factors in intestinal obstruction. These investigators have shown that in this condition intestinal intoxication is due not to bacteria and their products but to a change in the mucosa itself, to what might be best described as a perverted physiological activity of the intestinal mucous membrane. From their experiments, it is manifest that, although the normal mucous membrane does not itself contain toxin to any extent, yet that, under conditions of obstruction, it does. If not only excretes a toxin into the lumen of the bowel, but it retains it within its own cells, and it is the latter, not what is excreted into the lumen of the gut, that is the source of the systemic absorption and intoxication. Now, if there were any affinity between the "obstruction conditions" of these observers and intestinal stasis or if the two conditions, so far as the change wrought in the cells of the intestinal mucosa, had anything in common, then manifestly we would be in sight of a clue as to the source and cause of intestinal toxæmia, and a plausible justification for excision of the portion of the bowel so affected. But there is very little in common. These experiments, however, direct attention to a source to which very little attention has

hitherto been given, and we can conceive a disturbed neurotrophic function, or an absence of the normal mobility of the intestinal wall, or an altered reaction of the various enzymes, simple or bacterial, so altering the cells of the mucosa in intestinal stasis as to lead here also to a perverted physiological activity, and to elaboration of a something within its own cells, the absorption of which would be prejudicial to the well-being of the organism; but whether this pathological x can give rise to the 17 direct and to the 9 indirect effects of Sir Arbuthnot Lane is quite another question.

#### Intestinal Stasis.

If the nature of intestinal toxæmia is vague and indefinite, not less so is the mechanical factor, or in modern terminology, "intestinal stasis." How few even of those who place "stasis" in such bold relief agree as to its cause—some consider stasis as due to abnormal mobility of the cæcum, others to acute bending at the flexures, especially the splenic; some to adhesions around the ascending colon—either developmental or inflammatory—others to abnormal mesenteries, making traction on the bowel and kinking it. Yet, in no one of these conditions can there be so much impediment to peristalsis, as there is in a case of chronic peritonitis, where the number of abnormal kinks is legion, and where the bowels are almost all glued into one mass. If one were to apply Mill's canons of causation to any one of these conditions, considering it as the antecedent or A phenomenon, and "intestinal toxæmia" as the consequent or B phenomenon, what a lack of cogency as to the relation of causation between the two would be exhibited. There is absolutely no proof that any of these conditions occur more frequently in those supposed to be suffering from intestinal toxæmia than in those who are not. Where is the correlation between the amount of stasis and the degree of toxæmia? Taking them seriatim:—(a) Abnormal mobility of the cæcum. There is no proof that this condition is not compatible with normal intestinal action. (b) Kinking at the hepatic and splenic flexures. As the hepatic flexure almost always accompanies the transverse colon in its descent, it is very rarely, even where there is ptosis of the latter, that a kink is produced in the former. Owing to the strength of the phreno-colic ligament, a rather acute kink is conceivable at the splenic flexure, but it must be a rare occurrence. (c) Adhesions round the ascending colon, either developmental or inflammatory, and abnormal mesenteries, or in modern terminology, Jackson's membrane and Lane's kink. Here it is well to recall a few facts in embryology. It is well known that in lower forms permanently, and in the human foetus as a transition stage, the alimentary canal and its mesentery have a lineal attachment. In the human foetus, as development proceeds and as rotation of the large intestine and descent of the cæcum takes place, this lineal attachment gives place to what, for want of a better term, we may designate as an extensive glueing (a physiological adhesion) of mesenteries and viscera to the posterior wall of the abdomen, as an adaptation to the upright posture of after life. The extent of this cohesion is not rigidly fixed; on the contrary, it varies, as has



been well pointed out recently by Douglas Reid, when discussing the genito-mesenteric fold. Oscillations beyond the usual limit of such adhesions occur in a certain percentage of cases, but yet within a normal orbit of variation. In his "Descent of Man" Darwin states: "Our ignorance of the laws of variation is profound; not in one case out of a hundred can we pretend to assign any reason why this or that part has varied. . . . Specific characters, or those recently acquired, are more variable than generic characters, or those which have long been inherited." Considering that extensive adhesion of mesenteries and viscera, as compared with lineal attachment, is, as it were, a neomorph or recent acquisition in the ancestral history, the wonder is not that it varies, but that it does not vary oftener than it does. In the developmental history of the individual, the last part of the mesentery to become adherent to the posterior wall of the abdomen is that in the angle between the terminal ileum and the ascending colon; and thus we are half prepared for oscillations in the extent of adhesions here, either on the side of defect where the process of adhesion fails, leaving the bowel suspended by a free fan-shaped mesentery, or by excess, such as is the adhesion binding the mesentery of the terminal ileum to the pelvic fossa, and one extending from the cæcum and ascending colon to the adjacent parietal peritoneum; or, as they are nowadays commonly known, Lane's kink and Jackson's membrane.† That an ileac kink ever directly leads to ileac stasis, I have grave doubts, because as the contents of the terminal ileum are fluid, unless there is extreme stenosis—which there is not—they can pass without difficulty; indirectly it is conceivable inasmuch as the ileac kink may inhibit the relaxation of the ileo-cæcal sphincter close by.

A slight digression here may not be altogether inappropriate to allow the distinguished Baronet to state the case for "stasis" in his own words: "The causation of stasis and the consequent infection of the gastro-intestinal contents are due to improper feeding in early life, and subsequently to the prolonged assumption of the erect posture of the trunk. The changes which result in the drainage scheme are evolutionary in nature, and mechanical in origin. To meet the tendency of downward displacement of the viscera, which results from an accumulation of faecal matter, at first in the large intestine, and later in the small intestine and stomach, membranes or mesenteries develop. These bands represent the crystallization of resistance. Anything emanating from a great surgeon and a great pioneer in surgery must be received with becoming respect, but I trust it is not inconsistent with that respect to state that if anything is evolutionary in nature it cannot be mechanical in origin, and if it is mechanical in origin, it cannot be evolutionary in nature. Does

not Lane "cut the ground from under his own feet?" Does he not disprove his own case by admitting that these bands were found in young children, in whom the forces to which he attributed their origin, had not yet begun to act at all? Surely the drawbacks of the erect posture were scarcely to be felt at that tender age? And, again, if the erect posture is responsible immediately, or remotely, for all this disturbance in intestinal function, would it not be a rational indication to refer patients back to the "all four position?" Quadrupedal progression may be awkward for a time, but if it were relaxed on rare festive occasions, seeing that under its benign influence there would be no necessity for "bands to represent the crystallization of resistance," it may be more acceptable to many than parting with their large intestine.

But while admitting that these bands may be in some cases of developmental origin, still the inflammatory origin is more probable, and probably covers a far greater number of cases. We know that bacteria can pass from the intestine into the peritoneal cavity and excite a plastic adhesion locally, and in this plastic exudate a congenial matrix is found in which connective tissue may progress along the lines of stress and strain. This opens up the whole question of isolated peritoneal adhesions, and it would seem from some of the statements in current literature as if these peritoneal bands were a new finding, something not known in the distant past, whereas the contrary is the case. More than a quarter of a century ago Treves wrote: "The most common cause of the peritoneal false ligament is perityphitis, and it is needless to state that of all forms of limited peritonitis this is the most frequently met with." But they can occur in any portion of the abdominal cavity where the exciting cause is present, i.e., where there is some inflammation of the serous coat of the bowel (supervening on any cause that allows micro-organism to traverse its walls, such as ulceration or injury), which contracts adhesions with some other part of the peritoneum. Thus the so-called "double-barrelled ascending colon" is formed when the transverse colon, becoming elongated, assumes a V or U shaped bend, and one limb of the V becomes adherent to an ascending colon, whose serous surface is inflamed, whereby the organization of adhesions (chronic pericolicitis) the bowel becomes narrowed, fixed or kinked. Those who are obsessed with the developmental origin of these bands make larger demands on the flights of the imagination than on the powers of observation. Thus some will have a developmental band leading to intestinal stasis, because it produces a kink at the terminal ileum, and as a further result of this another kink is produced at the end of the duodenum, and from this dilatation of the stomach and duodenum, and ulceration, either gastric or duodenal.

There is another aspect to this question of "kinks" which it may be well to emphasize. It does not require one to be a skilled radiographer to see that there are inherent weak points in investigating the motor functions of the alimentary canal by X-rays. To appreciate the abnormal in any de-

† To get a clearer conception of the latter structure it is well to bear in mind that at the time of birth both the cæcum and ascending colon undergo a gradual migration from a position in front of the right kidney towards the right iliac fossa. This migration occurs only in orthograde primates. Not only is there a movement of descent, but in a certain proportion of cases after the ascending meso-colon becomes attached by a secondary adhesion to the parietal peritoneum, both the cæcum and the ascending colon rotate on their longitudinal axis, and thus roll a portion of the parietal peritoneum around themselves, something similar to what takes place when a person lying down to tucks the bedclothes around himself and then gives himself and his covering a half rotation.



partment, it is necessary to be fairly conversant with the normal, but intestines containing a large amount of such a heavy substance as bismuth can scarcely be said to be functioning under normal conditions. Again take the case of the terminal ileum as it emerges from the pelvis—it inclines in different directions, the shadow on the screen is only in one plane; the rays from the tubes are divergent. Is it any wonder that it would appear at times as if forming kinks, when there are no actual kinks to be found? But the X-rays have been very useful in another direction—they have shown that the abdominal viscera, so far from being fixed, are freely movable, that they move with the respiratory tide, and that the most important mechanism for their support is not the mesenteries, but the musculature of the abdominal wall. When we recall the work of Gaskell on the structure, distribution and function of the nerves that innervate the viscera, when we ponder over the constitution of a segmental nerve, with its splanchnic afferent and efferent, as well as its somatic afferent and efferent, we begin to realise how the tone and contraction of the musculature of the abdominal walls and of the alimentary canal are correlated; and that, perhaps, Professor Geddes is right after all, when he says that laxity of the abdominal wall is the prime cause of displacement of the bowels with consequent stasis.

The researches of L. Hill and others have shown how intimately the tone of the abdominal muscles is associated with that of the viscera and also with the position of the body. In the upright position the abdominal muscles respond reflexly to the increased burden thrown upon them. The mesenteries contain numerous Paccinian corpuscles, which are generally regarded as end organs for receiving pressure stimuli. These reach the spinal cord through the great splanchnics and leave by the intercostal nerves, and by means of them the common nerve mechanism regulates and co-ordinates the somatic muscles corresponding to the splanchnic region whence the stimuli have come. On the other hand, it is probable a direct effect is exerted upon the movement of the intestines by the contractions of the abdominal wall, and it is likely that a normal condition of tone in the abdominal walls has a certain reflex in producing a like state in the underlying viscera. But the abdominal muscles have not only to support the viscera but also play a prominent part in respiration, and this brings us to the question of enteroptosis as a respiratory disease. According to Keith, enteroptosis\* is due to the upsetting of the balance between the inspiratory and expiratory group of muscles, which strive for mastery during the lifetime of each individual, and the most important factor in its causation is not the yielding of the visceral mesenteries, but the active contraction of the diaphragm, which supervenes on a relaxed or parietic condition of the abdominal walls. For our present purpose we realize how profound a question visceroptosis is, and how superficial is the view that alights on one organ, be it colon or kidney, and gives it special attention to the exclusion of others.

\* These facts were illustrated in the lantern demonstration.

We shall now bring this long and desultory discussion to a close by considering its bearing on resection of the large intestine, and we would wish here to guard against being misunderstood. It has been no purpose of this paper to detract in the least from the reputation of that great surgeon of Guy's Hospital to whom surgery is indebted for so many and so useful innovations. Its role tends in a totally different direction. It is quite compatible with one to generously acknowledge that Sir Arbuthnot Lane may, in certain cases, by removing a permanently diseased colon, confer a lasting and very material benefit on his patient, and restore him or her to health and vigour, and yet to condemn in measured terms the false and pernicious principles contained in his teaching that the colon is a "cesspool" or "common sink." If the great bowel is diseased excision may lead to better health. What does this prove? That a man who has no colon is better off than one who has a diseased colon.

It is quite another thing to state that a man who has no colon is in a better state than a man who possesses a healthy colon. It is no proof of this latter statement that if a normal or healthy colon is excised health may still be maintained. A considerable portion of the small intestine may be removed with safety. Does it follow that this portion has been useless to the organism? To go a little more into detail. If we accept Treves' estimate (as a result of the examination of 100 bodies) of the average length of the small intestine as 22ft. 5in., and if we take the result of investigations (a) experimental of Senn, Tozebicky and Monari; (b) clinical of Rosswell, Park, Coffey and others, as to the limit or dividing line, beyond which the removal of small intestine is followed by grave disturbance in assimilation and below which the small intestine may be excised without such disturbance supervening as 5ft. 6in., we see that roughly about a fourth of the small intestine, which equals almost exactly the length of the large intestine, can be removed without interfering notably—if at all—with the economy. I am aware that 11ft., as in Ruggi case, has been excised with success; but 5ft. 6in. suffices for my argument. I repeat then, that if Lane by a sort of intuition of genius can give a new lease of life to certain chronic invalids, nevertheless his teaching is not to be followed without very nice discrimination, at least by the vast majority. Great men in surgery, as elsewhere, sovereign minds, precisely by what they possess that is incommunicable rise high and alone above their fellows, and by reason of this superior side of their nature they do not, as it were, belong to nature. In science, in poetry, and art, the great gift of the inspiration of genius has not revealed its secret; the same may be said, perhaps, in a lesser degree in surgery. The great danger is that others, lesser lights if you will, captivated by the brilliant advocacy of this surgical genius, fascinated by his forcible and impressive teaching, may regard short-circuiting and resection of the large intestine as mere text-book surgery, to be applied on any occasion and on every frivolous pretext, to all conditions of men and women on whom this vague condition "intestinal toxæmia" may be supposed to reside.

## Reports of Cases.

### ENDOCARDITIS PNEUMONICA; RECURRENT PYREXIA OF UNKNOWN ORIGIN.

By J. W. Springthorpe, M.A., M.D.,

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The following cases of unusual interest are in continuation of a series which have already appeared in "The Intercolonial Medical Journal of Australasia," or "The Australian Medical Journal" (vide Appendix).

#### (1) Case of Endocarditis Pneumonica of the Pulmonary Valve.

H.H., a pale, sallow labourer, aged 50, admitted May 9, 1914. Family history good. Personally, always healthy and steady. Present illness began a fortnight ago, with a cold after a wetting. Came in on the 4th day of acute pneumonia affecting the middle and upper lobes of the right lung. Crisis on the ninth day. Heart sounds clear and heart dulness then normal. Instead of the expected convalescence, a septic attack set in, with rigors, as shown on the chart.

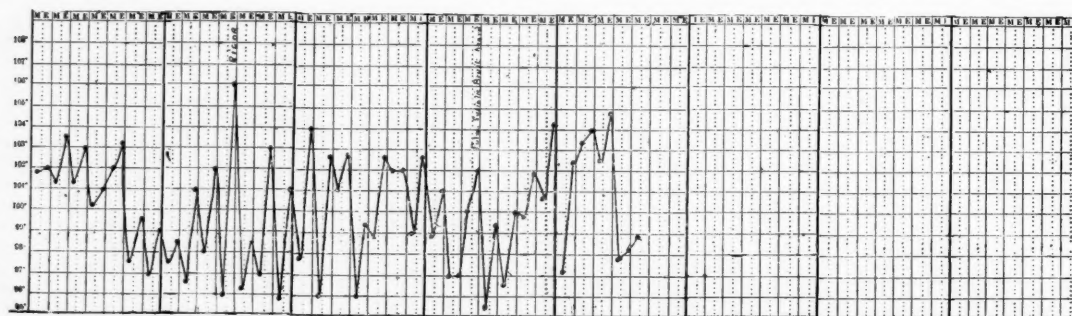


Chart I.

On the 13th May crepitations and slight dulness were heard at the left base.

On the 23rd the heart sounds were almost inaudible. There was a suspicion of dulness to the right of the sternum.

On the 30th crepitations were present over the greater part of the left lung. These increased up to 8.6.14.

On the 1st June a loud systolic murmur was heard over the pulmonary valve, and a questionable double murmur over the mid sternum.

On four different occasions pus was sought for without success over different areas of the right lung. The sputum free from tubercle bacilli.

The patient died on 10th of June.

The post mortem examination disclosed a flabby dilated right heart. On the pulmonary valve large polypoid vegetations, measuring  $\frac{3}{4}$  by  $\frac{1}{4}$  by  $\frac{1}{2}$  inch were attached to the posterior valve by a narrow pedicle. They were ulcerated all along the attachment. Other vegetations  $\frac{1}{8}$  inch in diameter were present on the other two cusps. All the other valves were clear. The right lung was in a state of low-grade pneumonia, especially the upper lobe. No infarcts were found on the right lung, while the upper lobe to the left lung showed two recent infarcts almost an inch in diameter, and the lower lobes numerous softened areas. There was no active pus anywhere, and no other notable lesions or infarcts elsewhere.

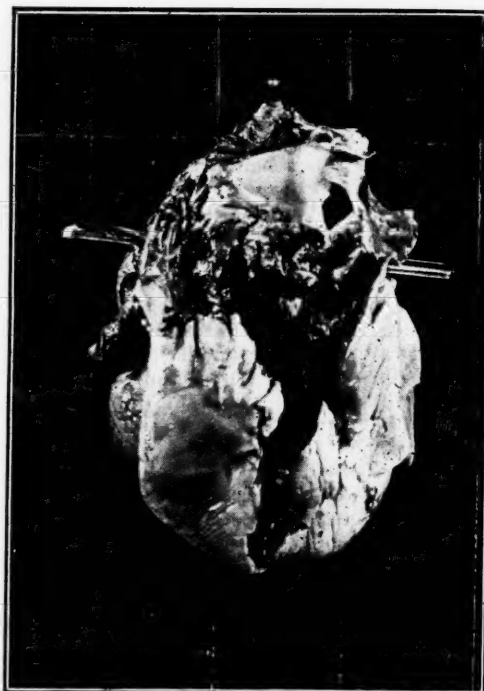
Remarks.—Endocarditis pneumonica has been found in 5.8 per cent. of 2,693 autopsies on acute pneumonia. It usually attacks persons who have passed thirty years of age. It is ulcerative in some three-quarters of the cases, and the vegetations are almost always large and polypoid. In striking contrast to the rarity in other forms (less than 1 per cent.) the right heart is affected two or three times as often as the left, but the pulmonary valve—"that area of auscultatory romance"—is still the least frequently affected. Many good authorities make no mention of either stenosis, or regurgitation. Preble, in his series of 141, found that in five (i.e., 3.5 per cent.) this presence of stenosis or regurgitation is noted. According to Türgensen, the record is

only made in 2.3 per cent. As regards our local experience this seems to be the first case reported as having occurred in our hospital. In the Pathological Museum at the University there are five specimens (3526—3530)—one from a septic uterine case, the other four of unreported origin.

Professor Allen writes: "In some, destruction predominates, in others there are vegetations of varying size, but in no case comparing with the present specimen."

The clinical history was characteristically dubious. In search of pus we needled the right lung in the axilla, base, lower and mid interscapular regions; but in vain. Acute pneumonic phthisis seemed less rather than more probable, and though ulcerative endocarditis was suggested, the recognised physical signs of implication of the pulmonary valve showed themselves only nine or ten days before death, and thirteen days after the preliminary rigors. (The signs shown post mortem to be due to infarcts, etc., had been explained on the belief that the left lung had been secondarily invaded with pneumonic processes.)

No treatment proved effective, and until cardiac surgery becomes an expert art, it is difficult to see how such vegetations as were present could be satisfactorily treated. Preventively also, it is difficult to see how such a complication



could have been foreseen, much less averted. Of Preble's series, only four recovered (one was a doubtful case). Probably many slight cases occur which end favourably. The duration of cases—of all kinds—is given by Preble as varying from 7 to 180 days, with an average of 30 days. Our case lasted 25 days.

## (2) Fatal Case of Recurrent Pyrexia, ending in Toxæmia without known cause.

S.P., aged 26, a shearer who gambled his cheques, then for several years past a bootmaker. Family history good. Personal included measles, mumps, typhoid and pertussis, without notable sequelæ. No history of syphilis, malaria, rheumatism, sexual excess or intestinal dyspepsia, but frequent neuralgia from bad teeth. He was first admitted on 24th April, 1914, for a febrile attack of sudden onset, five to six days' duration, accompanied by some headache (vide Chart). This attack was treated as influenza, and the patient was discharged well after a few days.

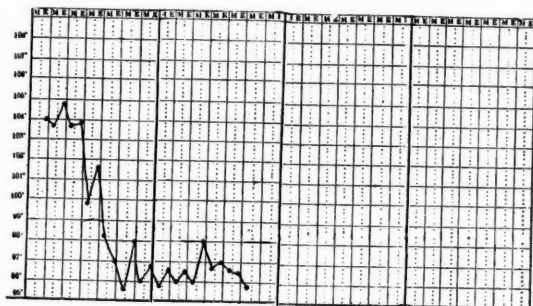


Chart II.

He was again admitted on the 29th of May, on the second day of a similar attack. His face was flushed, the pupils were dilated and equal. His fauces were normal and the skin was dry. Left-sided headache was complained of, and a peculiar mental condition was noticed. He was not irritable, and failed to describe his sensations. He referred to his mother to explain what he felt. This condition was followed after a few days by curious delusions. He stated that he was "suffering from someone else's symptoms," and cried because his mother was dead. He did not, however, show any surprise at seeing her on the same day. It became necessary to restrain the patient by strapping him in his bed. Even during the remissions of the fever he was distinctly delirious from time to time. Chart III. shows the course of the fever in the second, third and fourth attacks.

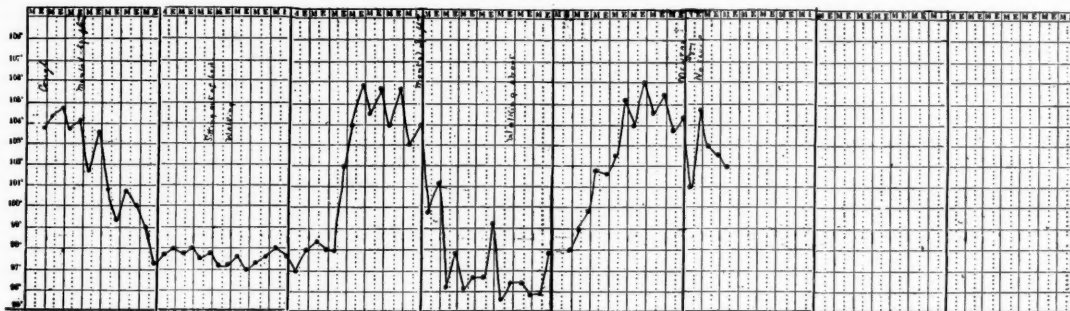


Chart III.

Careful enquiry then disclosed that, during the past nine months (of which he had worked only five weeks) he had had thirteen similar attacks. Only the last one or two, however, were accompanied by symptoms of mental disturbance. No cause could be found in the shape of diet, fatigue, alcohol, masturbation, seasonal changes, excitement, infection, gastro-intestinal disturbance, noxious fumes, or the like to account for the attacks.

General description of an attack.—The onset was sudden, without constipation, diarrhoea, vomiting, expiratory or rigor. He had the appearance as if a heavy cold was coming on, the eyes looking "glassy," and the left side of the face, ear and neck were flushed. This lasted for two or three days before he felt actually ill. Insomnia was his own warning. After losing a night's rest he had a left frontal headache, and then would stay in bed. If he got about he felt sick, and would fall. If he slept on the following night the attack would disappear, but if not the symptoms would grow worse, his temperature would rise to 103° or 104°, and remain elevated for three or four days. Since February, attacks of transient delirium had appeared, unnoticed by himself, and without any sensory or motor symptoms. In between these attacks he appeared and felt quite well.

After the attack on the 29th May, 1914, remained in bed nine days, with a sub-normal temperature. On the 14th June, 1914 (vide Chart) another attack came on, without any ascertainable cause. The previous day his eyes were noted to be "misty and shifty" (his mother had noted this two days before, on her visit). On the 14th, being otherwise apparently well, both mentally and physically, he left the ward after lunch at 2 p.m., to visit his mother, who found his temperature at 3.30 to be 104°, and brought him back to the hospital by tram. Two hours after his temperature was 102.4°, at midnight 105°, P. 120, R. 28, without any rigors, sweating or pain. He slept badly. The two-hourly chart, from 10 a.m. to 6 a.m. on the following day, indicates that the temperature rose to 105° or over (once 105.8°) on eight occasions. It was between 104° and 105° six times, P. 124—100, R. 24, blood pressure 116. Sponging had no effect. After midnight on the 14th, he became light-headed and confused, remembered nothing the next day, but answered intelligibly on the 16th. On the 17th both malar bones were flushed, he complained of headache, some deafness, without tinnitus or giddiness, in the left ear. If he sat up things seemed to move from right to left. Since the 14th the left pupil was the smaller. Both reacted to light and accommodation. There were no tremors, ataxia, scotomata, or other sensory phenomena. Both eyes and ears were found to be normal on examination by specialists. The urine contained no abnormal constituents. The blood contained no organisms or parasites. The Wasserman reaction was negative. No tubercle bacilli were found in the scanty sputum. Twice during the fever he "felt drowsy at once," and slept soundly after an injection of distilled water.

The next—and fatal—attack came on seven days later (vide Chart). On the 28th of June he did not complain, his mental condition was unclouded, and he slept soundly. On the 2nd of July the attack proved to be more severe and to run a more rapid course than the previous attacks. Jaundice made its appearance for the first time (he had

not been out of bed since the previous attack). The spleen was found to be enlarged, and nausea and vomiting set in. The urine was scanty, loaded with bile and required to be drawn off. The bowels were confined. He passed two clay-coloured stools during two days. The patient had practically no sleep, and his mental condition was much affected the whole time. On the 5th death took place, without any recovery of his normal mentality.



**Post Mortem Notes.**—The skin was jaundiced. The body was somewhat ill-nourished. There were no petechiae. Some free fluid was found in the abdomen. The heart muscle was flabby, and there was some fibrosis. Some atheroma of ascending aorta and marked linear arterioma of the whole length of the aorta were found. A remnant of the thymus had persisted. The mediastinal aortic and mesenteric glands were enlarged. Lungs: Both bases were markedly congested, and finely granular throughout. Old adhesions were present everywhere. Liver: Some perihepatitis and considerable fibrosis, with fatty change were seen. The gall bladder was full of mucus, but no bile. The ducts, both common and cystic, were patent. Toxaemic conditions were well marked. Cause of death: Congenital syphilis, Toxaemia.

**Remarks.**—Unfortunately, the patient died before a bacteriological examination of naso-pharyngeal flora or special metabolic examination of the urine was made, as intended. A careful and reliable macroscopic post mortem examination disclosed no exciting cause of the toxæmia, or of the pyrexial attacks. Prior to the final hæmolytic jaundice, the symptoms seemed possibly due to some unknown agent, acting through the nervous system, as in migraine, the part affected being probably the left corpus striatum and surroundings, though why, and in what way remains unknown. The signs of congenital specific taint received neither corroboration nor suggestion from the history or clinical manifestations. The case remains inexplicable. Possibly this careful statement of the salient facts may be of use in explaining or treating any similar condition in the future.

**Previously Published Reports of Cases of Hospital Patients.**

- |   |                     |
|---|---------------------|
| (a) Case of Stokes-Adams Disease due to specific disease of the bundle of His .....             | I.M.J., April, 1908 |
| (b) Case of (?) Gliosis of the Calamus Scriptorius .....  | I.M.J., April, 1908 |
| Sequel .....  | I.M.J., April, 1909 |
| (c) Case of Syringomyelia of the Entire Cord .....  | I.M.J., April, 1909 |
| (d) Psycical Babinski and Recto-vesical Incontinence .....                                      | I.M.J., April, 1909 |
| (e) Case of Guinea near the left red nucleus .....  | I.M.J., Nov., 1909  |
| (f) Case of Falling Gouty Heart with New Method of Graphic Representation of Heart Sounds ..... | A.M.J., June, 1910  |
| (g) Our Treatment of Acute Pneumonia .....  | A.M.J., Nov., 1910  |

**A CASE OF LEPROSY (MIXED TYPE).**

By **Victor Hurley, M.B. (Melb.),**  
Melbourne.

The notes of the following case seem to be worthy of record not only on account of the rarity of leprosy in Victoria, but also because in this particular patient there were certain points of interest in the differential diagnosis.

B.K., a Russia Jew, æt 52, was first seen in my Out-Patient Clinic at the Melbourne Hospital on 10th July, 1914. His history was not easily obtainable, owing to his difficulty in comprehending the meaning of questions put to him, and of answering these intelligibly. Three years ago he noticed weakness of both hands, with some swelling and slight pain, followed a few weeks later by definite wasting when the swelling of the hands subsided. He was admitted to a public hospital in another State for some weeks, and discharged without much improvement. He arrived in Victoria 15 months ago, and, at that time, presented the following condition on examination. There was well-marked wasting of the muscles of both hands, the thenar and hypothenar muscles, as well as the interossei, being affected. There was also marked loss of power, so that the patient could neither pick up pins or other small objects, nor exert any considerable muscular force. Neurological examination in other respects was negative, and he was thought to be a case of progressive muscular atrophy. Some weeks later it was noticed that anaesthesia was present over the dorsum of hands and the forearm, distributed in patches, chiefly on the ulnar aspect. The tendon phenomena, etc., were normal, except that the reflexes were somewhat active, but equal. This led to the diagnosis of syringomyelia of the cervical cord.

My notes as to his condition on the 10th July, 1914, are as follows: He complains of a growth involving the skin over the right tendo achilles about three inches above its insertion. This commenced as a nodule three months ago, and has increased to its present size—about that of a crown piece. Three or four weeks later he noted the development of numerous subcutaneous nodules, distributed over forearms, lower limbs and body. There was no pain. He stated that some of these disappeared on repeated pressure, and others appeared.

On examination, over the right tendo achilles, in the position already mentioned, was a flat, **lowly papillary**, rasp-

berry red growth, about two inches in diameter. There was a slight discharge, but no marked ulceration. The nodule had well defined, firm, rounded edge, and was freely movable over the tendo achilles. On the posterior aspect of the neck was a small, rounded, healing ulcer,  $\frac{3}{4}$  inch in diameter, and over the lower left costal margin another ulcer, irregular in outline and with pigmented edges. The nodule situated over the tendo achilles resembled an epithelioma, while that over the costal margin was more like a tertiary gummatous syphilide. There were numerous hard rounded nodules under the skin of both lower limbs—chiefly on the flexor aspect, and one thickened nodular cord was felt running up deeply in the right calf. Numerous nodules on the forearms, chiefly on ulnar aspect and of size varying from that of a pin's head to that of a large bean were found. The larger ones were obvious beneath the skin. Some of them were adherent to it, and moved with it, while others were more deeply situated, so that the skin moved freely over them. There was no distribution of the nodules corresponding to any of the larger nerve trunks. There were also two nodules in the glans penis. The mucous membrane of glans showed no scarring. There was a brown, patchy discoloration of the skin of the abdomen, chest, back and shoulders, and irregularly segmental in distribution. No leucodermatous areas were seen. The skin was very hairy.

The neurological examination confirmed the presence of the signs enumerated, viz., wasting of hands, marked, patchy and incomplete anaesthesia over the dorsum of both hands, anaesthesia over the forearms, especially on ulnar aspect, and patchy, small areas of anaesthesia on the buttock. Both ulnar nerves and both external popliteal nerves were markedly thickened, nodular and only slightly painful on manipulation. A definite "claw hand" present. The skin of the hand was glossy. The facial aspect presented the following characteristics. The features were coarse and gross, the lips thick, the nose large and eyebrows heavy, but the type was not definite "leonine," owing to his Russian extraction. He stated that his features had not altered in appearance. One small nodule in the skin was situated over the left eyebrow, but, according to the patient's account, this had been present for many years. His speech was thick; the tongue was large and clean. The fauces were slightly injected. The Wassermann reaction was negative.

The papillary growth over the tendo achilles was excised for microscopic examination, as were also two of the nodules. One of the larger nodules adherent to the skin was pricked with a needle, and from the slightly turbid fluid which escaped mixed with blood, films were made. In all of these when stained by the Ziehl Neelsen method, the presence of multitudes of markedly acid fast bacilli were demonstrated, which in every way conformed with the characteristics of leprosy bacilli. Lepa cells were also present.

The case was therefore demonstrated to be one of leprosy, of the mixed type, the nodular and anaesthetic lesions of the disease being both well marked.\*

As to the possible source of infection, no conclusive evidence was forthcoming. The patient arrived in Victoria in 1886, and, after remaining in Melbourne for 15 months, migrated to New South Wales, in the Maitland district, where he lived for five years. On the trip out in 1886 he first went from Russia to Germany, New York, Austria, Alexandria, Aden, Hongkong and Singapore to Melbourne. After leaving New South Wales he went to Auckland for some months, then back to Sydney, whence he proceeded to West Australia. He lived in Perth for 18 years. He left Perth 15 months ago and settled in Melbourne. His occupation was that of greengrocer and hawker, until incapacitated by the loss of power in his hands. He had also had a small drapery business, but never dealt in second-hand goods, nor did he come in contact with any lepers either directly or remotely since his arrival in Australia.

I am indebted to Dr. R. F. Watson, Resident Pathologist of the Melbourne Hospital, and Dr. S. J. Campbell, of the Pathology Department of the University of Melbourne, for the pathological examination of the specimens.

\* Mixed cases frequently show the development of the anaesthetic type supervening on the nodular, and it is extremely rare to find cases which commenced with the nerve lesions, and later develop nodules.—McCaw, *Keen's Surgery*, Vol. IV., pp. 1085, et seq.

## Medical Journal of Australia.

SATURDAY, AUGUST 15, 1914.

### Britain's Call.

Britain has need of her medical sons, and will certainly not call in vain. In her hour of trial, with a possibility, nay probability, of numberless citizens of the Empire lying wounded or sick on the field of battle, she looks to the medical profession in all parts of the world, and especially in her own dominions and territories, to volunteer to bring succour to the wounded and those affected by contagious diseases which always abound when armies oppose one another in warfare. We have nothing to do with the causes of war; we are not, in our professional capacities, concerned with the justice or wisdom of strife. The medical profession, indeed, in common with the other branches of science, knows no nations and no races. The medical profession has but one aim, viz., to prevent disease from occurring, and to cure it wherever and whenever it breaks out. No sacrifices are too great for the profession in its continuous struggle against trauma, disease and death.

In Australia to-day, the Army Medical Corps, divided into "Districts" corresponding to each State, supplies the Army of the Commonwealth with all its medical and surgical needs. The corps is composed of medical practitioners who give their time voluntarily to the service of their country, and who are prepared to face dangers and to share the privations of the professional soldier on the field. The militia is still young, and the need of a full complement has scarcely been recognized, so that at the present time, in none of the Districts is the strength of the corps full. Volunteers are required at once, and we feel sure that a large number of practitioners will respond. The volunteer should apply in writing to the P.M.O. of his district, stating whether he is prepared to join the expeditionary force or whether he is merely willing to accept duty within the Commonwealth. A considerable number of applications have been received within the past few days in New South Wales, and doubtless in the other States. Nurses, too, are

volunteering for duty, both at home and wherever the expeditionary force may require them. In the case of nurses, the full strength in the majority of the districts is available, but in the exceptional circumstances, additional volunteers are sought, who may be called upon to serve, as the occasion arises.

In last week's issue we printed a notice of a resolution passed by the Queensland Branch of the British Medical Association, to which we would call the attention of the whole profession. It is highly desirable that similar resolutions should be passed in every State. The members of the Association in Queensland will carry on the work of those practitioners who join the field force during their absence, but they undertake on the return of their colleagues not to attend any of the patients who have sought their help during the war, and to relinquish all appointments taken over during this period. A guarantee of this kind is probably unnecessary, but it should be given in every instance, so that the sacrifice which any volunteer or member of the A.M.C. makes is not increased by financial loss on his return. We feel sure that the guarantee will be gladly given by all who remain at home, tending to the people of Australia, and we trust that the nature of the assistance rendered will be clearly understood by the patients themselves. Much unpleasantness and difficulty may be avoided if it be understood from the first that under no circumstances can the attendance be continued by the practitioner at home after the return of his colleague from the campaign.

It is, of course, impossible at the present juncture to give any indication as to where the expeditionary force will be sent or what form of service it will take up. Modern warfare is vastly different from that of last century, and modern field surgery is still more different. The surgeon in the field to-day will gain experience such as has never been gained before, and will be in a position at a later date to offer valuable lessons, which may tend to lessen the suffering of the wounded. During the Balkan war, some extraordinary observations were made in regard to the effect of bullet wounds of the head and chest. The prognosis of injuries from various

projectiles, when the injured is taken alive from the field to the hospital, will undoubtedly improve greatly during this war. The ingenuity of the surgeons of every country will be brought to bear on this subject, and ordinary surgery will be modified to become adapted to the sorry conditions of the battle-field. The volunteer who joins the expeditionary force must be prepared to sharpen his wits to the utmost and to give his best to the cause of humanity and to his country.

We know the profession in Australia will respond promptly and readily to the call, and that within the next few days will send forth numbers of its best men to follow the one humane aspect of war—to look after those who have fallen under the murderous weapons which characterize the civilization of the twentieth century.

#### DISPOSAL OF SEWAGE AT BRISBANE.

The drainage question as it affects the city of Brisbane is one which has given every sanitarian considerable cause for anxiety. It is recognized on all hands that a time has now come when a scheme should be drawn up and carried into effect for the effective removal of house sewage, and for the proper disposal of the sludge and effluent. After long delays, the Minister for Works, the Honourable W. H. Barnes, has determined to carry the city sewage from all parts of Brisbane through a system of sewers to Luggage Point, in the neighbourhood of Sandgate. The sewage would be discharged without preliminary treatment into the sea, near the mouth of the river. It may be pointed out that the construction of the necessary sewers will be very expensive, and that as the sewage will be discharged through the outfall at Luggage Point, no return can be effected on the capital. A large and influential deputation waited on the 31st July on the Minister for Works, for the purpose of bringing to his notice some of the objections to this scheme. It was pointed out that under certain circumstances, a sewage outfall at Sandgate would be highly offensive, and possibly dangerous to health, the debris often being carried up by flood tides on to the beach. In the next place it was stated that the flow in the sewers would be sluggish,

owing to the small fall in considerable lengths of the sewers. In these circumstances, it would be necessary to overcome the defects of the insufficient fall by manual sweeping, and by hosing. Grave objections exist to the employment of men in sewers with small falls for the purpose of cleansing. The Minister, however, proved adamant to all arguments, and announced his intention of adhering to the original scheme. From the point of view of economy, it is unwise to sink a large quantity of capital in sewers which are likely to give rise to difficulty, and which will merely serve the function of removing sewage from the populous districts. There are, among others, two methods of turning sewage into money: the first is by irrigation, the sewage being utilized as manure for the land, whereby the effluent is rapidly neutralized by the oxidizing action of the soil and its contained bacteria, and at the same time the land is enriched to a great extent. The second method is to collect the greater part of the particulate matter by coarse screening, and to sell this material, or to incinerate it for the purposes of various manufactures. In the latter case the effluent can be discharged in a suitable situation into either sea or river, or can be purified by chemical or mechanical means, so that a practically pure effluent results.

Brisbane is not so large that it becomes necessary to sacrifice economic interest in favour of the rapid removal of sewage. It would probably be advisable under the existing circumstances to select either the irrigation method or the coarse screening method with the discharge of a comparatively pure effluent into some of the higher regions of the river. The screening is best carried out by a circular oblique disc, similar to that employed in Dresden and elsewhere. This disc is composed of copper, and is perforated with holes two millimetres in diameter; the sewage is passed through the disc, which catches up all particles of sizes greater than that of the openings. In order to prevent blocking, the upper surface of the disc is automatically cleaned by circular brushes operating in two directions. The coarse particles collected in this manner can be stored in suitable receptacles, without producing any other material odour, provided that a



small proportion of chloride of lime or other disinfectant is added.

Whatever method is selected, it is certainly short-sighted for the Minister of Works to embark in a scheme which is expensive to carry out, which carries with it no possible profit, and which may give rise to endless trouble as a result of mechanical difficulties.

#### LONDON UNIVERSITY EXAMINATIONS.

Some time ago the Secretary of State for the Colonies issued the final report of the Royal Commission of University Education in London. In this report it was proposed that the London University examinations, held in the self-governing Dominions and in the Colonies, should be discontinued. This proposal was received with considerable regret by the Ministers of Education in Australia. The Prime Minister of New South Wales requested the State Governor to intimate to the Colonial Office the disapproval of the Government in New South Wales of the proposal of the Royal Commission. In addition the Agent-General lodged a protest against the contemplated cessation of the examinations. We need hardly point out that even if the London University is not at present in a satisfactory condition, a discontinuance of these examinations would be disadvantageous from the point of view of education. We presume that sooner or later the London University will emerge from its chaotic condition, and take on a new lease of life under a satisfactory organisation. The national character of the future University of the world's metropolis can only gain by the preservation of the few good features of its present existence. It was therefore a satisfactory piece of news that the Agent-General handed on from the External Registrar of the London University that the University had not ceased to hold these examinations in the oversea Dominions.

#### LODGE AGREEMENTS.

In view of the fact that it is impossible at present to foresee what the effect of the war will be on the commercial prosperity of the Commonwealth, it has been decided in Melbourne by the Victorian Branch of the British Medical Association that the demand for an increase of fees from the Friendly Societies will be waived during the currency of the war, and that the negotiations will be continued in the hope that a mutually satisfactory arrangement may be arrived at for the time when the normal conditions of affairs are resumed. At a meeting held at Brisbane on the 7th inst., the following resolution was passed by a unanimous vote:—

"It was unanimously resolved to recommend to the Branch that in view of the commercial depression resulting from the war and the need for mutual self-help, the introduction of the new agreement between medical men and their lodges be deferred for the present";

and at a special meeting of the Council on the 8th, it was resolved that the initiation of the Common Form of Agreement between medical officers and lodges be deferred. The British Medical Association is thus making wise and generous provision for the medical attendance of those who may be seriously affected from a financial point of view by the war.

#### UNIVERSITY OF WESTERN AUSTRALIA.

On 29th July, 1914, the first graduation ceremony of the youngest university in the world—the University of Western Australia—was the occasion of a remarkable gathering in Perth. A distinguished company was present, and his Excellency the Governor presided. The Pro-Chancellor, Mr. Cecil Andrews, M.A., sketched the history of the foundation of the University, which had entered upon its existence in 1913. Five or six years ago it was announced that the University of Queensland was about to be established. The need of a university in Western Australia—the only State at that time without one—was felt very strongly, the more so because the nearest university was four days distant from Perth. In 1909 a Royal Commission was appointed to consider the subject. This commission issued its report in 1910, recommending the establishment of a university as soon as possible. In 1911 an Act was passed establishing, incorporating and allowing the University of Western Australia. The first Senate was appointed in 1912, and active teaching was started in 1913. A number of other excellent speeches were delivered and degrees conferred.

On the 29th July, at the graduation ceremony of the Perth University, the following degrees were conferred on members of the British Association: LL.D.: Sir Harry Rudolf Reichel, principal of the University College, Bangor, North Wales, and Vice-Chancellor of the University of Wales. D.Sc.: Gunnar Anderson, professor of geography, University College of Commerce, Stockholm; William Bateson, director of John Innes Horticultural Society and Fullemerian, professor of physiology, Royal Institution; Frank Watson Dyson, Astronomer Royal; Alfred Cort Haddon, University reader in ethnology, Cambridge; William Abbott Hendman, professor of natural history, University of Liverpool, general secretary of the British Association for the Advancement of Science; August Desire Waller, member of the senate and director of the physiological laboratory, University of London; Johannes Walther, professor of geology and palaeontology, University of Halle.

The degree of LL.D. was also conferred in absentia on Sir Winthrop Hackett, LL.D., first Chancellor of the University and founder of the chair of agriculture.

We have received a copy of a useful little pamphlet, entitled "Before the Baby is Born," which has been compiled under the supervision of the Director-General of Public Health for New South Wales. It gives sensible advice on the chief points in connection with the expectant mother and her unborn child. Mr. Flowers has appended the following introduction:

"The aim of this little booklet is to show women who expect to become mothers how to take care of themselves. If the State is to get healthy babies, it must have healthy mothers. Women often make mistakes for the want of a little skilful advice. Such mistakes harm both the unborn baby and the expectant mother, and often cause long years of misery and suffering to both. The needful lessons are very simple in the following pages."

## Abstracts from Current Medical Literature.

### MEDICINE.

#### (65) Hyperchlorhydria and Hyperthyroidism.

G. Maranon (Madrid) ("Revue de Médecine," March 1914) deals with the relationship of hyperchlorhydria in many cases to an increase in activity of the thyroid gland. Twenty cases are quoted in detail, in all of which the outstanding symptom was excessive gastric acidity with the usual symptoms of pain coming on some time after food, and relieved by the taking of more food. The condition in all cases was verified by examination of the gastric contents. In most of the cases the thyroid symptoms, unless looked for, might have passed unperceived. He compares the condition in this respect to the gastric crises of tabes where careful neurological examination, even including examination of the spinal fluid may be necessary to establish a diagnosis of tabes. He lays stress upon the observation that most of these cases would be included in the group of so-called gastric neuroses. Maranon summarises his observations thus: "Practically, the conclusions that we draw from our cases are: that in definite hyperthyroidism the existence of hyperchlorhydria is an indication for the more energetic pushing of anti-thyroid treatment, and that this is the type of case which especially benefits by thyroidectomy. Amongst temporary remedies, those to be preferred are the preparations of atropine, which paralyse the pneumogastric nerve. In all cases of hypersecretion or hyperchlorhydria of nervous type, it is wise to explore the stigmata of hyperthyroidism, which perhaps will give the explanation of the secretory disturbance and the clue to its intractability to the usual methods of treatment."

#### (66) Diastolic Blood Pressure.

Nicholson ("American Journ. of Med. Sciences," April, 1914), in an article on "The Clinical Significance of Diastolic and Pulse Pressure," emphasises the futility of depending only upon the systolic readings of blood pressure, and the importance of the diastolic and pulse pressure. He says that the importance of these at once becomes apparent when it is understood that the former represents the amount of resistance the heart has to overcome to cause the blood to flow, and that the latter shows how much excess of pressure the heart is exerting to carry on the circulation. While the systolic pressure by itself may furnish a great deal of information, it may also be misleading, unless checked by the diastolic and pulse pressure readings. As an example, a man of 60 presents himself with a systolic pressure of 135. This sounds good until one finds that his diastolic pressure is 110, giving a pulse pressure of only 25, showing at once that there is cardiac weakness and a diminished circulatory flow. The pulse pressure should be approxi-

mately 35 per cent. of the systolic pressure.

The use of vasodilators in hypertension should always be checked by the diastolic pressure. In high tension cases, with a normal ratio between systolic and diastolic pressure, the administration of vasodilators would merely have the effect of allowing the heart to race like a motor engine with advanced throttle. The heart is already doing its work adequately. Many other directions in which the estimation of diastolic pressure is of value are described, and the relations between pulse rate and diastolic pressure so urgently insisted upon by Lauder Brunton are thoroughly discussed.

The auscultation method introduced by Korotkow in 1905, and elaborated by Lauder Brunton, Janewar, Goodman and Warfield is the only accurate one, and the only one practicable for clinical work. The different phases of the sound heard on auscultation of the brachial artery below the arm-band of the manometer are accurately described, the point to be taken as the diastolic reading being that point where the thumping sound becomes suddenly fainter before ceasing altogether. The absolute cessation of all sound gives too low a reading. In fact, in aortic regurgitation in many cases the tapping sound may be heard over the artery without any compression.

In conjunction with this article may be read one by Howell in the Journal of the American Medical Association of April 18, 1914, on the possibilities in the use of auscultatory methods of determining blood pressure in pneumonia. He discusses fully the pulse blood-pressure ratio of Gibson, and, while agreeing that in normal healthy adults it is of great prognostic significance, in pneumonia it is of little value in the aged, especially those with hypertension, and in the young. He advocates strongly the systematic estimation of the diastolic pressure, as being of much more value in both the treatment and prognosis of pneumonia.

#### (67) Lime Starvation.

Russell ("Med. Record," 1913, and "Therap. Gazette," Jan. 15, 1914) has an article on the treatment of lime starvation. He considers short fibrinous exudations indicate excess of lime in the tissues and circulation, and that serious effusions co-exist with lime starvation, and that other evidences of lime starvation are to be found in incomplete development, lessened vitality and the failure of reparative processes. It is especially in tuberculous conditions, medical and surgical, that this condition is present, and that he considers there is a deficiency of assimilable and utilizable lime. He notes that calcium phosphate is not assimilated unless combined with a protein. The diet he suggests is two eggs, a quart of milk and  $\frac{1}{2}$  oz. of dilute hydrochloric acid daily, with fat emulsions. Eggs and milk contain abundant calcium phosphate, which can only be utilized in the presence of hydrochloric acid.

#### (68) Ventricular Fibrillation under Chloroform.

Goodman Levy (Heart, May, 1914) has further examined the conditions under which extra systoles of the ventricle and ventricular fibrillation are brought about under chloroform, especially with a view to testing his previous suggestion that the ventricular irregularities may be dependent on a rise of blood pressure. As a result of a long series of experiments, he concludes that ventricular fibrillation is produced by cardiac stimulation under light chloroform anaesthesia, independently of a rise of blood pressure. Increased interventricular tension may occasion the appearance of rhythmic ventricular extrasystoles, which, however, are not a specific chloroform effect, and have not been observed to lead to ventricular disturbances of a higher grade. Measures which tend to diminish the volume of blood supplied to the heart are unfavourable to ventricular irregularities induced under chloroform. A certain degree of intra-cardiac vascular tension—about 100 mm. Hg. or over—favours ventricular extrasystoles and fibrillation. A lower tension is adverse to their existence. Dilatation of the ventricles is a condition which is protective against ventricular fibrillation. It is on this ground that the protective action of full doses of chloroform is explained.

#### (69) Curing Ataxia.

Malone ("Journ. of Nerv. and Mental Dis.," 1913) deals with the treatment of tabetic ataxia by blind-folding. It is of interest in that it revives the assertion that complete cure of ataxia may be produced by exercise. He states that "the method of enhancing sensory perception in the cure of ataxia has been used with success by the author. Blindfolded tabetics can quickly be taught to appreciate their surviving postural and muscular sense impressions to such a degree that hopeless bedridden ataxies quickly learn to walk again."

### NEUROLOGY.

#### (70) Freud and His School.

Van Renterghem gives in the "Journal de Neurologie," January, 1914, a very interesting account of the genesis and work of psycho-analysis. He asks, in the first place, what Freud means exactly by the word "analysis." We all analyse our patients, and in the presence of mental trouble of course the psychic examination is of more importance than the physical. In questioning the patient and listening to his story we often arrive at an exact comprehension of his morbid condition, and are able to suggest therapeutic means to assuage, or often remove, the trouble. Often, however, it is necessary to look deeper for the roots of the morbid agent, for the patient is only able to communicate to us that of which he is conscious, and it is necessary to penetrate to the most profound depths of the psychic life to become possessed of its secrets. All that has acted upon us since our earliest infancy leaves an impression in

our brains and is there conserved. These impressions and these associations of ideas which spontaneous reflection or persistent questioning cannot bring back to consciousness belong to the obscure domain of the sub-conscious.

Now it is precisely outside the field of the conscious that the germs of psychoneurotic affections begin. Every effort of the doctor ought to be directed to the discovery of them, and to place them consciously before the individual to the end that he may obtain relief. This idea, this therapeutic method and its technique we owe to Freud, of Vienna. The whole method receives the name of psycho-analysis. Accurately speaking, it was Joseph Breuer who first evolved the idea in relation to the nature of hysteria, but Breuer did little to extend his idea, and it is to Freud that the main honour is due. Freud published his "Studies on Hysteria" in 1895, but it was unrecognised, and some of his works even as late as 1906 were received with derision, and even indignation. In 1911 the Professor of Psychiatry at Freiburg declared that Freud and his partisans were affected with an epidemic madness, and it was stated at the International Congress of Psychiatry, in Amsterdam in 1907, that his theories formed a poor joke. These were some of the judgments passed on Freud and his ideas, though at present the correctness of the latter is everywhere acknowledged. In 1905 the school of Zurich espoused Freud's ideas. Forel's successor, Bleuler, was the moving spirit there. What brought him to investigate the theories was the fact that among all the chronic invalids in the asylums hardly a quarter of the number presented anatomical lesions of the central nervous system sufficient to cause their psychic manifestations.

It is not easy to explain Freud's theory, in succinct fashion, clearly and distinctly. Its elements are very complex. His traumatic theory of hysteria, which implies that the nervous affection is based on some previous traumatism chiefly mental, is put by Jung as follows: Charcot showed that hysterical symptoms are psychogenous, that is to say, take their source in the psychic life. It is further recognised that every hysterical symptom can be reproduced by suggestion, but how hysteria is born in the psychic life was not known. In 1881, Breuer made an observation which has since led to the almost complete elucidation of this problem. He was treating a young and very intelligent lady for hysteria, of which the following were the principal symptoms: Spastic paralysis of the right arm, momentary states of mental obfuscation or twilight states with concomitant aphasia. She had lost the power of expressing herself in her mother tongue, and in her conversation used only English. The author of this paper, after pointing out various cases of hysterical

deafness, hysterical blindness, etc., to show that these affections can at times be definitely and absolutely hysterical, goes on to say that in Breuer's case the latter decided that there was no organic lesion. Breuer further observed that the patient in a state of hypnosis was greatly relieved for several hours through having been able to communicate freely to him everything which came into her mind through memory or imagination. He made a note of this relief. The patient had contracted her illness at the bedside of her dying father, and quite naturally her imagination carried her back to that troubled period. In her twilight states the mental representation of that period were drawn with the clearness and exactness of a photograph. In her waking state her memory could not reproduce the events with the same precision. The name "hypermnnesia" has been given to this condition. In this way the patient revealed many strange things. One of her numerous recitals was as follows:—One night seated at the bedside of her father, who was extremely ill, she began to dream though still awake. They were awaiting a surgeon from Vienna, who was to operate on her father. Her mother had quitted the chamber. Anna, the daughter, was seated with her right arm hanging over the back of a chair. In this position she dreamed that she saw a snake crawl down the wall. It was advancing towards her father to devour him (it is very probable that the young girl had previously been frightened by snakes.) She wanted to drive the snake away, but felt herself paralysed. Her arm was "asleep," and hung without life. When she looked at her hand she imagined her fingers changed into little snakes. When the vision disappeared, overwhelmed with anguish, she wished to cry in a loud voice, but could not find words. At length a little poem for children in English came to her lips, and from that time she continued to think and to pray in English. The paralysis and the aphasia which followed on this scene disappeared whilst she was reciting it. Other symptoms disappeared in the same way, and thus her cure was realised.

Numbers of similar cases have been reported by Breuer and Freud, and from these cases Freud and others have become convinced that a very large number of mental troubles have their origin in somewhat similar catastrophes, and they believe that each patient possesses the key to his trouble in his subconscious mental content. Freud has developed a means by interrogation of ascertaining what this key is in very many cases. In the journal above quoted van Renterghem follows up and describes this method.

#### (71) The Albumen Content of the Cerebro Spinal Fluid.

Mycerson ("Journal of Nervous and Mental Disease," March, 1914) consi-

ders that the presence or absence of an increase in the normal albumen content is an important part of the routine examination of the cerebrospinal fluid, and that this constituent plays a rôle in the pathology of the nervous system of a peculiar and important character. He has examined over 100 cases of general paralysis; six cases of Korsakoff's disease, and over 100 miscellaneous conditions (dementia præcox, manic-depressive, cerebral organic disease, etc.) He draws the following conclusions:—  
1. In fully developed general paralysis the relationship of albumen, globulin, cells, and Wassermann is quite constantly one of parallelism, but in the remissions the Wassermann reaction disappears first, the cell count and globulin increase diminish next, and the albumen most constantly remains at a high level of increase. This points toward the conclusion that in the pre-parietic stage the albumen increase is probably the first sign of disease.  
2. In Korsakoff's disease, in certain cases of brain tumour, and other organic diseases, there is a dissociation of albumen and globulin in this sense, that there is either marked increase of albumen without globulin, or that a marked increase of albumen is accompanied by only a moderate globulin increase.  
3. These two series of facts lead to the further conclusion, that the increase of albumen is a primitive reaction of the nervous system, and is the first as well as the most constant of the present known chemical and biological changes to appear in the cerebrospinal fluid."

#### (72) Landry's Paralysis.

Leschke (Berl. Klin. Wochschr., April 27, 1914) reports on a case of Landry's paralysis which ran a typical clinical course. The autopsy revealed no macroscopical change; microscopically, the anterior horn cells of the spinal cord showed plasmolysis and chromatolysis to a greater or lesser degree. There was no evidence of inflammatory processes. In stained smears of the cord, small bodies 1—2 $\mu$  in length were seen, which occurred intracellularly as a rule. A few, however, were extracellularly placed. The stains used were Giemsa and carbol-fuchsin. The sections were treated with concentrated carbol-fuchsin for one minute, carefully decolorized with a weak solution of picric acid in absolute alcohol, until all except nuclei and red blood cells were decolorized. The Landry bodies then appeared as bright red particles. Emulsion of the cord in saline solution produced no effect when introduced intrathecally into rabbits and guinea-pigs, but monkeys died rapidly of a placid paralysis after an incubation period of 7 to 23 days. Landry bodies could be demonstrated in the spinal cords of these animals. Attempts at cultivation were partially successful.



# THE DIPHTHERIA PROPHYLACTIC OF E. VON BEHRING.

In an article on the *Berl. Klin. Woch.* of May 18th, 1914, E. von Behring points out that official statistics show that before the use of the ordinary antitoxic serum 60,000 people died each year in Germany of diphtheria, whereas at the present time the number has been reduced to 11,000 per annum. The number of persons saved from death would, of course, be enormously increased were all the other countries of the world taken into account.

Since antitoxin has the power of protecting individuals against diphtheria, it was naturally hoped that the number of cases occurring would have been greatly lessened by its use; but this hope has not been fulfilled, and in the case of Berlin it has been found that the number of cases is greatly on the increase, 3000 cases having occurred in 1906, whereas there were more than 11,000 in 1911.

The author mentions the various troublesome procedures adopted at present for the prevention of the spread of diphtheria, such as the closing of schools, the disinfecting of rooms and persons, the isolation of cases and of convalescent cases, the marking down of diphtheria carriers, etc. He states that every individual risk vanishes the moment an individual acquires an antitoxin content of 1-100th-1-20th unit per c.c.m. of serum. Numerous observations have proved that antitoxic serum is a certain preventive. It was to have been expected that it would have been extensively used for this purpose in practice; but experience has shown that it is not without its disadvantages. In the first place, the antitoxin, combined as it usually is with a heterogenous serum (horse serum), disappears from the blood so quickly that in 20 days the antitoxin of 1 c.c. of serum sinks from 1 in 20 to 1 in 1600. Further, if at the end of 20 days a fresh dose of antitoxin serum is given the antitoxin disappears at a much more rapid rate, so that in from five to eight days it is no longer present in the blood. Thirdly, a prophylactic dose of serum produces anaphylaxis, lasting for years, so that unpleasant results follow when later on it may be necessary to give a therapeutic dose, though the dangers of an anaphylaxis are very much over-estimated.

It was once considered that the shortness of the time that passive immunity lasted was an essential characteristic of this form of immunity, and that to obtain long-continued protection it was necessary to immunize actively. von Behring, however, conceived the idea that the difference in duration was to be sought in the fact that passive immunity was always brought about by means of heterogenous serum, whereas, of course, the active immunity was always associated with autogenous serum. The experience of 16 years has shown this idea to be correct.

Last year he tested the principle on a large number of guinea-pigs, and was able to prove that if anything, the passive immunity lasted longer under these conditions than did the active. It was well known to be an extremely difficult problem to render guinea-pigs immune to diphtheria toxin, but with the help of von Behring's new diphtheria material, T.A., this immunisation is said to be accomplished without difficulty. Of 50 animals treated, 80 per cent. were able to withstand the injection of several c.c.m. of diphtheria toxin 1.0 c.c.m. of which killed unprotected guinea-pigs, weighing 250 grams on 800 occasions. These immunized guinea-pigs gave him a "four to eight fold" diphtheria serum. He states that if he took what he calls a "five-fold" serum, and injected a 200 gram guinea-pig with two c.c.m. subcutaneously he would find that after 24 hours each c.c.m. of this animal's serum contained about one-half of an antitoxin unit. Guinea-pigs so treated were kept under the same conditions as actively immunized guinea-pigs whose serum had the same antitoxic value. The blood of both types was tested from time to time. The antitoxic value diminished rapidly for the first fourteen days, then it fell more gradually, until in three or four months it had sunk to 1 in 600 in both cases. He tested these with double the lethal dose of virulent bacilli. None of the guinea-pigs died. von Behring claimed, at the Wiesbaden Congress,

1913, that the same conditions hold good for man. Human beings appear to retain the antitoxin more tenaciously than guinea-pigs, and Dr. Hahn lately showed that serum which contained from 50 to 30 units per c.c. possessed one to three antitoxic units per c.c. after ten months, that is to say, a quantity a hundred times greater than that necessary to protect against diphtheria in ordinary epidemics. According to von Behring a very long time would be required to eliminate sufficient antitoxin from the blood to bring its content down to 1 in 20 or 1 in 100, a quantity which is still sufficient to give immunity against infection. The original immunity should, therefore, last at least one year.

This experience suggests that the quickest and most certain method of preventing diphtheria is the injection of homogenous antitoxin. An average immunity of twelve months would be established in a healthy child of one year or older, in whom a "1 in 5" immunity had been produced. For this purpose he reckons that 200 antitoxic units are required for each kilogramme of body weight, and this quantity of antitoxin is often contained in one c.c.m. of serum in a large percentage of cases undergoing the immunization method to be shortly described.

No sensitization takes place after an injection of homogenous serum, and thus in cases of necessity passive immunity of this kind can be repeatedly established year after year. But diphtheria antitoxin of human origin is of course only available for very few. von Behring has, therefore, devised a prophylactic T.A., consisting of a mixture of toxin (T.) and antitoxin (A.) which he states produces an active immunity. He suggests that this prophylactic should be used for the majority of persons. He considers that treatment with T.A. will not be sufficient for immunization unless it is injected at least twice with an interval of 10 to 14 days, and unless an unmistakable, specific, local reaction is produced. Very strong reactions are not necessary, and indeed not desirable, for if painful swellings occur in the neighbouring lymph glands there may be a failure of antitoxic production. In order to ascertain the dose necessary to produce a suitable reaction in any given case von Behring recommends the giving of two intracutaneous injections at the one time. One consisting of 0.1 c.c.m. of T.A. VIII., and 0.1 c.c.m. of T.A. VII.

If neither of these injections produce an undoubted reaction T.A. VII. is given in cases where there has been absolutely no reaction, or T.A. VII. If the reaction has been doubtful. The dose which produces a moderate reaction is repeated in 10 to 14 days.

The following procedure is adopted for the so-called "third method" of Hahn, which is said to give the best results:—0.1 c.c.m. of T.A. VIII. is injected, and if no reaction occurs on the 3rd day 0.1 c.c.m. of T.A. VII. is injected.

The dose is increased on the fifth day, 0.1 c.c.m. of T.A. VII. and still stronger doses are injected later on if necessary, the highest dose being repeated after the lapse of 11 days. He states that further experience must be gained before he feels justified in placing this prophylactic material at the disposal of the profession. In the meantime other important problems are being investigated, such as the question of the use of passive immunization, combined with T.A. treatment, a question which has been discussed in a recent number of the *Deut. Med. Woch.*, wherein several writers, including von Behring, state that whilst passive immunity gives an immediate protection, a greater or longer period must elapse before the advent of protection in the case of active immunization. Guided by his preliminary investigation, Hahn gives this incubation period of about three weeks. But since quite a definite amount of new formed antitoxin had been recognised in the blood after repeated injections, or in cases in which there was already some antitoxin in the blood, on the eighth, eleventh, fourteenth, and sixteenth days after the

immunizing injections, it is probable that the incubation period in such cases is considerably shorter than the time determined by Hahn. In any case some days must elapse in the most favourable cases before active protection against diphtheria results. Under certain circumstances, therefore, infection can still take place after vaccination, and it is a question whether active immunization should not be combined with passive immunization, especially when a very severe epidemic of diphtheria has broken out. In the case of K., reported by Matthes this occurred, and it was observed that the introduction of antitoxic horse serum did not disturb the active antitoxin production, although it did not favour it. Schick has also observed that active antitoxin production can proceed unhindered by the introduction of heterogenous antitoxic serum.

## Notes on Books.

### WORM NESTS IN CATTLE.

The results of his continued investigations into the etiology of worm-nests in cattle forms the basis of a special report (1) by Dr. Cleland, of the Government Bureau, of Microbiology, Sydney. The material contained in this publication is of scientific importance, and should be studied with care by all students of modern epidemiology. The parasite, *onchocerca gibsoni*, is conveyed from animal to animal by means of an insect vector. Dr. Cleland attempts to determine which insect undertakes this function. He adduces evidence from which it may be assumed that the vector is either *astomoxys caltrans*, or one of the mosquitos, more especially *culicella vigilax*. He traces the life history of the parasite as far as his investigations permit, and suggests further experiments which might determine the points still unsettled. He suggests that the biting insect carries the embryos of the parasite into the subcutaneous tissue of the bovine host, from which situation the young worms migrate an decrease in size. The migration is carried out partly by spontaneous movement, and partly by the muscular contractions of the host, and the onward flow of lymph. The arrest of the worms, usually in the substance of a lymphatic gland, is due to their entanglement with one another, and to the nature of the glandular tissue from which the individual worm has difficulty in escaping. He points out that it is by no means certain whether encapsulation is a normal process in the life history of *onchocerca gibsoni*. He further suggests that the fibrosis met with in the neighbourhood of deposited worms is due to a reaction caused by toxic products of the embryo. Embryos may be deposited by the unencapsuled worms during their migration, or they may escape from a developing worm-nest before its capsule becomes too dense. The biting insect picks up the embryos as soon as they reach a suitable position, and carries them to fresh hosts, thus completing the cycle.

The report contains a large amount of data and suggestions, and is a valuable contribution to the subject of the cause of a cattle plague, which has a considerable economic importance in Australia.

## British Medical Association News.

### SCIENTIFIC.

A meeting of the Eye and Ear Section of the Victorian Branch was held at the Eye and Ear Hospital, July 28, 1914, the president, Mr. Edward Ryan, in the chair.

Dr. Edward Ryan exhibited the following cases:—

(1) Non-specific choroido-retinitis.—This case showed very marked but quiescent choroido-retinal changes, like the specific variety. The patient aet. 22, the youngest of 10 children, all of whom were alive and well, gave a nega-

tive Wassermann reaction on two occasions, but a very severe von Pirquet reaction. The vision was R. 6/6, L. 6/5, and the field as taken by the perimeter were full. Dr. Ryan failed to see any marked characteristics to justify any more definite name for this condition. The patient had had no treatment.

(2) Double juvenile glaucoma in a boy aged 20. The mother had double glaucoma. The patient suddenly discovered he was blind in one eye, but felt no pain. Examination showed great cupping of the right disc, the eye was quite blind, and tension raised. The left eye showed increased tension and a great enlargement of the physiological cup. Dr. Ryan had trephined the right eye, and treated the left one with eserine for a short time, but later had trephined it as well. The vision had become full, and the field normal in one eye.

(3) Double glioma retinae in an infant. The patient was eight months of age. At six months it weighed 20 lbs., and at this age the mother noticed a pearl-like lustre in right eye. One week later she noticed a reddish-yellow spot in the left eye. The right eye showed a glomatous mass in the vitreous; the left eye had no anterior chamber, the lens was pushing the iris on to the cornea, and a reddish mass of new growth could be seen behind the lens. Mr. Ryan asked advice of members as to treatment. Dr. Sawrey advised no interference at present; later should either eye rupture, excision should be performed. He considered that excision in this case would not arrest the spread of the growth.

(4) Marginal ulcer of the cornea. This case had come under notice only that day, and the patient was confident that the eye was well a few days previously. There was a big marginal ulcer above, extending for one-third of the corneal circumference. It was anterior to Bowman's membrane, and was stained only at the marginal edge. Dr. Sawrey thought the condition was not unlike dendritic ulcer.

(5) New growth in the cornea. The tumour presented a heaped up, white velvety appearance; it had spread considerably in a few weeks, and now occupied nearly one-half of the cornea. There was some lagophthalmos, and Mr. Ryan proposed bringing the lids together, and also having a microscopical examination made of the growth.

Mr. Leonard Mitchell showed a case of cerebellar abscess. The patient, a male aet. 50, was admitted to the Victorian Eye and Ear Hospital on July 2, 1914, complaining of severe vomiting, which had commenced suddenly 48 hours previously. He was unable to keep any food down, but suffered very little nausea. Several days previous to admission he complained of a headache. He had suffered from a discharging left ear for ten years. On admission, the temperature was 98.8°, and the pulse-rate 80, pupils normal, no optic neuritis, knee jerks exaggerated, but all other reflexes were equal and active, and there were no disturbances of sensation or motor power. Leucocytes 24,000. An aural polyp was removed, and the ear well cleaned out. The vomiting continued during the night and the next day, and the cerebro-spinal fluid was found to be opalescent and to contain large numbers of polymorphs, but was under normal tension. The vomiting subsided, but the temperature kept between 100° and 101°. The patient complained of severe frontal headache on 6th, and the mental condition was dull. The same day the left mastoid was freely opened, and was found to be full of pus. The bone was extraordinarily eburnated. The cavity was cleared out and the lateral sinus, on being exposed, was found to be normal. On the following day the temperature was normal, and the general and mental conditions were greatly improved. On 17th the patient had a slight rigor, and the temperature rose to 100°, but there was no change in the general condition. Leucocytes 20,000. On the 21st the patient became suddenly worse, was mentally dull, and vomited incessantly. Temperature 97°, pulse-rate 76. Reflexes normal; lumbar puncture; clear fluid under pressure. Leucocytes 22,600; no optic neuritis. At 7 p.m., the original wound was opened and found to be clean. The lateral sinus was then exposed from the genu backwards for 1½ inches. Owing to the breaking of a bone-cutting forceps, the sinus was punctured, and it was impossible to follow the sinus further. A ¾ inch triphine

(1.) Further Investigations Into the Etiology of Worm Nests in Cattle, due to *onchocerca gibsoni*. By J. Burton Cleland, M.D. (Ch.M. (Syd.)), Principal Microbiologist, Government Bureau of Microbiology, Sydney. (1914.) Melbourne (Government Printer): pp. 56; 5 full-page plates.

hole was then made over the left lobe of the cerebellum, and an explorer passed horizontally inwards entered a large abscess cavity. About 1½ ounces of very foul pus escaped. A large drainage tube was inserted. The patient was much collapsed, and Dr. Morlet, the anaesthetist, advised that the search in the cerebellum be stopped. The patient improved later, but at 2 p.m. on the following day he suddenly collapsed, with signs of bulbar pressure. The bandages were removed. There was no hæmorrhage, and the abscess was draining well. The patient died at 3.10 of respiratory failure. An examination showed that the drainage tube was in the centre of a large abscess, the walls of which were only ¼ inch thick. There was no visible path of infection from the tegmen tympani, or thrombosis of any large vein. Œdema was marked, spreading from the abscess site to the base of the brain. The pus contained cocci and coliform bacilli. The instructive nature of the case appeared to Dr. Mitchell to be the great difficulty experienced in diagnosis. Up to the time for the second operation there was no localizing sign of any sort.

Dr. Sawrey said he was glad the case had been reported, as the evidence of the nature of the case had been so scanty, and he had been unable to localize the mischief.

A meeting of the New South Wales Branch of the British Medical Association was held on Friday, 31st July, 1914, at the B.M.A. Building, 30-34 Elizabeth Street, Sydney, Dr. Armstrong in the chair.

Dr. Flynn read a paper "On Some Reflections on So-called Intestinal Toxæmia, and its Bearing on the Surgery of the Large Intestine," being a continuation of a paper read before the Branch on 26th June, and published in the "Medical Journal of Australia" on 18th July, 1914. The text of the paper appears on p. 147 of this issue. At the conclusion of the paper, a lantern illustration was given, in which the more salient features of the mechanism of the support of the viscera in the upright posture were shown, as well as the physical conditions met with in connection with visceroptosis in general. He demonstrated that Lane's views on the causation of the condition called by him "intestinal toxæmia" are inconclusive. Lane assumes that the falling of the viscera leads to the formation of bands, which, in its turn, causes kinking of the intestine, and, in consequence, stasis and absorption of the toxic intestinal products. Dr. Flynn showed that there were ample other provisions apart from bands to account for the support of the viscera. Bands play a very subsidiary part, if a part at all, in keeping the abdominal viscera in place, compared with the part played by the abdominal muscles and other factors.

In the discussion, Dr. Stacey congratulated Dr. Flynn on his excellent paper, and pointed out that the question of the nature of the symptom complex, known as intestinal toxæmia, was most important. He did not think that the symptoms could be explained entirely on anatomical grounds. In many cases the trouble was due to the stretching of abdominal muscles, often in connexion with repeated pregnancies. He had given considerable attention to the frequency of ileac kinks, and supported Arbuthnot Lane in his contention that these kinks arise in the course of intestinal ptosis. Nephropexy and gynecological scars were frequently seen in patients whose symptoms were probably due to intestinal stasis. He expressed considerable doubt whether symptoms referable to Jackson's membranes were as serious or frequent as is alleged. He agreed with Dr. Flynn that the function of the splenic flexure was of considerable importance in this connexion. In regard to the pallor so frequently met with in persons who were supposed to be suffering from symptoms due to the absorption of poisons from the intestine, he was of opinion, after repeated blood examinations, that these patients were not really anæmic. There was considerable abuse of iron in treating these patients. In conclusion, he was inclined to support Lane in his general contentions, although he realized that Lane exaggerated the significance of many of the symptoms.

Dr. Nash, after congratulating Dr. Flynn on the industry he had displayed, and on the importance of his work, stated that bacterial digestion in the cæcum explained many phenomena which were obscure before. He hoped

that a continuation of investigation would enable us to form a correct understanding of what happens to food during its progress along the alimentary canal. He had always sought for an explanation of what takes place in the test tube when acids or alkalis are added to urine. Dr. Flynn's remarks on indol, indican and their allies recalled to his mind these test tube phenomena. He thought that the varieties of colour which appear at the line of contact, between cold nitric acid and urine gave information as to (1) the digestive functions carried on within the alimentary canal, (2) the manner in which bile passed from the liver cells to the duodenum, and (3) the amount of hæmolysis which took place in the blood stream. He could not agree that any organ or portion of the body had no function, and held the view that a person who had been subjected to an operation for the removal of an organ or of any special tissue, no matter how apparently unimportant this might be, was not in so perfect a physiological condition as a person who had not been subjected to the surgeon's skill. Dr. Flynn had made out a good case against the acceptance of Lane's theory in regard to intestinal kinks. Every surgeon met with palpable and visible kinks of the major kind, both in the large and in the small intestine, without any signs or symptoms of intestinal toxæmia being present. It was quite common for a ventral or inguinal hernia to contain several loops of bowel, and even an abdominal organ might be found within the sac. These and many other facts led him to agree with Dr. Flynn in his destructive criticism of much that is accepted as correct.

Dr. Morton joined the previous speakers in congratulating Dr. Flynn on his excellent work. He thought that the evolutionary part of the paper was more convincing than the latter part. The cæcum had the function of performing cellulose and starch digestion, but if it was not provided with sufficient work it became incapable of carrying out this function. In regard to the question of visceroptosis, he supported Longyear in his insisting on the importance of the association between nephropptosis and cecalptosis, and did not think that ptosis of the other abdominal organs was of the same importance. He drew attention to the frequent association of cæcal symptoms, especially mucus colitis, with ptosis of the cæcum and kinking, and thought that the primary condition was due to constriction by corsets. He did not agree that pregnancy was so great a factor as had been insisted upon by Dr. Stacey, and drew attention to the importance of the nephrocolic ligament in suspending the hepatic flexure. He thought that in operations for displacement of the kidney the colon should be fixed as well. He suggested that Jackson's membrane might have the function of providing a collateral circulation for the upper and outer walls of the bowel. He recommended the middle line incision for exploratory operations in these cases. He quoted a few cases to illustrate that patients whose cæcum had been removed had got quite well and their alimentation had become good. He also drew attention to the fact that in a case where he had found it necessary to remove the cæcum, a fistulous condition of the large intestine had resulted, and the bowel had become markedly contracted throughout the whole of its length.

Dr. Gordon Craig expressed his congratulations to Dr. Flynn, and contested the assertion that the large intestine was more or less functionless. He was therefore against its removal. He drew attention to the fact that one must be careful in not drawing far-reaching conclusions from the results of radiographs after bismuth meals and enemata, and insisted that for the kink to have any pathological effects there must be evidence of a dilation of the bowel proximal to the kink. He also referred to the works of Goldthwaite, and found that the treatment of visceroptosis by postural exercises had given good results. He agreed with Goldthwaite's opinion that the lessening of the sub-diaphragmatic space was the causal factor of entropptosis rather than the stretching of mesenteric folds; hence he was against plicating operations in such cases. He also drew attention to the relief obtained in cases of rheumatoid arthritis by postural treatment, and thought that the removal of the intestinal stasis might explain the good effect.

Dr. Woolnough would have liked to have heard something in the way of constructive instead of destructive criticisms



of the doctrines of chemical pathology in the connexion. As a general practitioner, he recollected that he had seen several patients who had gone through this operation without any marked improvement in their general health.

Dr. Binney supported Dr. Flynn's protest against the statement that the large intestine was a useless organ, and suggested that cæcostomy or appendicostomy might be useful as a temporary drainage operation in intestinal stasis, followed by postural treatment, and tonic treatment afterwards. Dr. Bullock drew attention to the varying results of Lane's treatment in cases of diseases such as Still's disease, where in some cases, short-circuiting appeared to have had some good effect.

Dr. Wade congratulated Dr. Flynn, and advocated, especially for children, less radical measures. He expressed himself a firm observer of Goldthwaite's views that enteroptosis depended chiefly on postural effects and weakness of the abdominal circulation. He stated that no peritoneal ligament was strong enough to support a large organ such as the liver or spleen, and that these viscera, in addition, were provided with supporting shelves, so that if the normal posture was altered, displacements of the organ were likely to take place, and improvement therefore could only be effected by suitable postural measures. He was of opinion that the flat-chested, round-backed and sallow child was the subject of intestinal stasis, and advocated in such cases the restoration of the lumbar lordotic curve. He recommended gymnastic exercises of the abdominal muscles for the restoration of their normal length, and did not approve of extensive surgical methods, such as plication of mesenteries or the sewing of organs into position, as these had not proved successful in his practice.

Dr. Darling referred to Lane's treatment of tuberculous hip disease by removal of the colon, and pointed out that no reliance could be placed on these results, since the diagnosis was doubtful. It was probable that some of these cases were not tuberculous at all, but were due to streptococci or *b. coli*. He referred to the fact that, in constipation, organisms were frequently found in the urine, and that in intestinal toxæmia streptococci were often present in the urine and in blood.

#### MEDICO-POLITICAL.

A special meeting of the Brisbane practitioners, convened by the Queensland Branch, was held at Brisbane on 31st July, 1914, to reconsider the question of the mileage rates from Brisbane and suburbs in connection with the common form of agreement, and also to consider motions by Dr. A. Jefferis Turner and Sir David Hardie.

Dr. Turner moved:—

"That, in the opinion of this Branch, contracts for medical treatment should include disease whatever may be its cause, and that no patient should be denied treatment on the ground that his disease was caused by immorality."

In speaking to the motion Dr. Jefferis Turner said that, in the model agreement adopted by the Branch, it was the duty of the medical officer of a lodge "to attend to all cases of illness, hurt or accident, provided that such illness, hurt or accident be not occasioned by any misconduct, drunkenness or immorality." At the time of the adoption of the agreement, he made a protest against this exclusion, but his views were apparently not shared by some of the members present. He did not press his objection, as he realized that the Council wished to gain the acceptance of the agreement as it stood. He hoped that the question would receive full consideration at the present meeting. Theoretically, the excluding clause might be applied to many cases. For instance, if a man, through drunkenness, fell from his horse and fractured his arm, he might be charged a fee by his lodge doctor. But it would be very difficult to prove that the fracture was in reality due to drunkenness. He presumed that in practice the clause would only apply to cases of venereal disease. He did not think it was necessary for him to point out the appalling consequences of venereal disease, nor the importance for the public health of affording every facility for effectual treatment. It was the duty of the medical profession to treat all diseases, whatever be their cause, and if any diseases required treatment more urgently than others, it was those which were communicable. He wanted

to see this proposition applied to contract practice, and not flouted in an agreement which the medical profession had drawn up. The clause must be deleted for the honour of the profession.

As he did not attend lodge patients, he realized that he was laying himself open to the charge of being generous at other people's expense. But every medical man was now interested in the conditions of lodge practice, and they had all contributed to the discussion which led to the demand for an increase of fees and for the inclusion of a wage limit. He thought that some lodge practitioners exaggerated the amount of extra work required in the treatment of venereal cases. He asked them to consider what would be the proportion of these cases to the total amount of their work. He reminded his audience that the provision he was advocating had been embodied in the National Insurance Act of the Old Country, at the instance of the British Medical Association. A burden that the medical practitioners of Great Britain took on themselves should not be refused by the medical practitioners of Australia. The Government had made provision for the free treatment of venereal diseases in certain centres, and if his proposition were adopted, the practitioners in these districts would be in an easier position. Cases requiring special treatment could be referred by them to the State Medical Officer, where such facilities were not provided, it would be still more important that lodge doctors should not evade their duty. He asked whether a syphilitic would pay for medical supervision extending over three years. A man who was within the wage limit might be able to pay for a few attendances, but he would not obtain the necessary prolonged treatment. Further, the lodge practitioner should attend to the health of the family of the member, as he had contracted to do.

He presumed that his opponents had not really considered the question at issue. He hoped that it was not true, as had been stated, that persons suffering from venereal diseases had to pay both the doctor and the chemist double fees. It had been stated that these cases gave a lot of trouble and were nasty, disagreeable cases to have in a consulting room. To make them pay a fee would be to apply a deterrent. No one refuses to treat a rich man for gonorrhœa to deter him from getting a second dose. It was agreed that because patients suffering from venereal diseases could not, according to lodge rules, claim sick pay, therefore they should not be given medical treatment under the agreement. If the profession was to obtain its ethics by dubious inferences from the rules of Friendly Societies, he thought that it had sunk to the lowest depths of ethical baseness. In regard to the suggestion that the practitioner would treat any given case gratuitously if necessary, he pointed out that this meant that the patient was to be told that he must either pay extra fees or receive the private charity of the doctor. Or else, he, and possibly his wife and children, must go to the devil. At present, the doctor was supposed to make both a medical and a "moral" diagnosis. He must decide whether the symptoms in every case were caused by the "immorality" of the patient. It was said that the interests of the profession and those of the public were always identical, if seen in the proper light. He asked those present to consider that the Friendly Societies constituted a large section of the population, and that it was of public interest that among them venereal disease should receive prompt and thorough treatment. If the profession persisted in failing in its duty in this respect, there would be only one remedy. The duty which they would not undertake voluntarily must be forced on them by the strong arm of the State.

The President (Dr. Alex. Marks) read a letter from Dr. F. W. Harlin, dated 27th July, in which the writer opposed Dr. Turner's views strongly. He contended that contract practice in Australia was in fact a form of insurance contract with the Friendly Societies. These societies had to protect themselves against certain risks, since they set out to insure their members at low rates, and at the same time encouraged them to be thrifty and provident. If the Friendly Societies could not recognise any claims for incapacity due to the member's fault, he failed to see how the profession could agree to supply, under the contract treatment of conditions due to drunkenness or immorality

If Dr. Turner's proposition were carried out, the rate ought to be increased by 2/6 or 5/- per member. This would mean that every member would contribute an extra amount for the treatment of a few, who had contracted diseases as a result of their immorality. The writer analysed the business conditions of the societies, and lastly drew attention to the risks which medical men ran of contracting the diseases while attending their patients. To include diseases caused by immorality, etc., in contract medical work would penalize thrift and self-restraint to pay for the treatment of diseases caused by intemperance and profligacy: that was to tax morality to pay for immorality. All experience showed that diseases caused by immorality did not stand in the same category as ordinary diseases, and were a greater risk.

Dr. J. Thomson considered Dr. Turner's position to be on a definitely higher ethical plane than that represented by Dr. Harlin. The efforts of the profession should be directed towards reducing the incidence and effect of disease; and the exclusion of venereal diseases from treatment under lodge contract practice undoubtedly conduced to neglect of proper treatment. It was degrading to the profession to struggle for increased fees while at the same time conducing to the increase of the evil effects of venereal disease by refusing to treat it on the same conditions as other diseases.

Dr. Robertson was in agreement with the general principle of Dr. Turner's motion, especially from a public health point of view. Whether it was right, however, for the Branch as represented by the meeting to ask men holding lodges to do what the motion expressed without increased fee, was another thing. He felt that, since he did not hold lodges, he should not vote.

Dr. Culpin, jun., could see no excuse or justification in passing the motion as it stood. It singled out a special class of practitioners to make a vicarious sacrifice; a sacrifice which those chiefly concerned, i.e., the lodges, had not asked them to make; and to do so while practitioners who had no lodges were not called on to sacrifice anything for their opinions. He proposed as an amendment "That, in the interest of the public health, the opinion of the Queensland Branch of the B.M.A. is that the treatment of venereal disease should be without fee." If Dr. Turner's motion was justified, then this amendment was a logical consequence. The *raison d'être* of Dr. Turner's motion was the benefit of the race. Then why are lodge practitioners only to be called on to altruistically help the race. He was sure that it was not the fee which kept lodge members from seeking, and paying for, treatment, but the same causes which operated in non-lodge members, i.e., shame and ignorance. Gonorrhœa was usually in single men who could afford to pay. It would mean a great deal of additional unpleasant and indeed dangerous work (as instanced by the considerable number of medical men contracting syphilis in the course of their work). Drunkenness was also excluded by the lodges, and had to be paid for; why not propose to include it? It was hardly the thing for Dr. Turner, who had no lodges, to propose increased work for those who had.

Dr. Spark said that the contract with the lodges was a limited contract. There were all sorts of conditions excluded as well as venereal disease, e.g., midwifery operations, vaccination, etc. Such a change should not be made unless the contract was changed as a whole, and there was no call for this. Vaccination was as important to the community as the treatment of gonorrhœa, yet no objection was made to its exclusion. The lodges would not agree to make the "moral" man pay for the "immoral" by increasing the lodge fees so as to include venereal diseases. He seconded Dr. Culpin's amendment as carrying to its logical conclusion Dr. Turner's motion.

Sir David Hardie agreed with Dr. Turner. It was of vital importance that venereal disease should receive efficient treatment. It should be a free gift. There should at any rate be no extra remuneration. It was a particularly opportune time, when the profession was asking for higher fees from the lodges to proffer this concession, which would, he felt sure, be productive of great public benefit.

Dr. G. P. Dixon on the whole agreed with Dr. Turner's motion. From his large experience in connection with the treatment of venereal diseases, in the State's Ethnethic

Disease Department, he had become convinced that the essential thing was to educate the public on the seriousness of inefficient treatment of these diseases. The persons seeking treatment at the State Ethnethic Disease Clinic was only a small proportion of those who should do so. By passing Dr. Turner's motion, the profession would set an example of what should be done, and would be backing up their advice by action. He was speaking from the point of view of the public welfare. The efforts being made by the Government in order to be efficient must be backed up by the medical profession.

Dr. Butler (hon. secretary) stated that Dr. Gibson had asked him to state that he considered it essential that the Branch should affirm that the duty of the profession was to do its utmost to check the effect and incidence of disease, and to allow no motives of self-interest to interfere with this object.

Speaking for himself, Dr. Butler said that, in deciding to support Dr. Turner's motion as it stood, he was influenced by the following arguments. The profession, of late years at all events, had indicated definitely its opinion that venereal diseases should be looked on in exactly the same way as any other disease, and that the question of morality should not enter into consideration. The importance to the nation of efficient treatment of venereal diseases was undoubted and pressing. He thought that the motion should be passed, to show that the medical profession meant what it said, and to conduce to the introduction of the principle into a most important sphere of practice, viz., lodge practice. From the general point of view, he was in a condition of no little doubt as to the proper attitude towards the question of "immorality" of venereal diseases. While the profession had decided that venereal diseases should not be termed "immoral," yet the circumstances under which the diseases were ordinarily acquired made consideration of this aspect inevitable. The pamphlet issued by the Commissioner of Public Health commenced with the statement, "Venereal disease is neither a crime nor a punishment." If by "punishment" was meant a consequence of improper action, then venereal diseases must, in his opinion, be frequently looked on as a punishment; and occasionally the contraction of the disease, e.g., by married men, was a hideous crime. The diseases were unpleasant and difficult to treat; involved greater responsibility and trouble than most other diseases, and the profession, in offering to forego special conditions for venereal disease, would be doing so in accordance with its altruistic and public spirit.

Dr. McLean was of opinion that medical men were concerned with the treatment of disease alone. The question of morality or immorality should not enter into consideration. Venereal disease required treatment in the interest of public health, and there should undoubtedly be some general move made on the part of medical practitioners to ensure this.

The President (Dr. Marks) apologised for the absence of Dr. Espie Dods (Government Medical Officer), who had intended to speak, and whose conviction was very strongly that no differentiation should be made in the treatment of diseases, and that the question of morality or immorality should not enter into the matter. He had always endeavoured to obtain the public recognition of this view.

Speaking for himself, Dr. Marks thought that the motion should have been in two parts: one dealing with the general question, the other referring to lodge contract work. It was hardly fair to add fresh work to a partial contract, without specially revising that contract. While he did not feel justified in supporting the motion as it stood, he was strongly of the opinion that venereal disease should not be differentiated from other disease. He thought that the great majority of lodge doctors did not charge as a rule for treating venereal disease in lodge patients, and he was sure that hardship or neglect of treatment from inability to pay was very rare.

Dr. Turner, in reply, said that there was no such thing as an immoral disease. The way in which it was acquired may have been immoral; it would be necessary in judging this to know the temptation to which the person had been exposed. He himself had always treated venereal disease for nothing if the patient could not pay. He did not think it fair that it should be suggested, as had been done, that,

as a specialist, he was proposing fresh burdens for the men who were not. He could not understand any man letting a patient go from the surgery untreated because he could not pay. It was not only the man himself but his family present or prospective. The National Insurance Bill in England included venereal diseases. There had been a good rise granted, he heard, by the lodges; it would be a fair thing now for lodge men to offer this concession as a public benefit. A fair and upright principle of lodge practice would involve treatment of venereal disease. He did not think that the motion should be altered, though he understood the reason for suggesting it.

Dr. Culpin's amendment was put to the meeting, and was lost.

Dr. Turner's motion was then put to the meeting, and was lost.

## Medical Societies.

(Affiliated with the British Medical Association.)

### EASTERN SUBURBS MEDICAL ASSOCIATION.

A meeting of the Eastern Suburbs' Association was held on Thursday, 23rd July, 1914, at the B.M.A. Building, 30/4 Elizabeth Street, Sydney, Dr. P. L. Hipsley, the President, in the chair.

Drs. G. H. Broinowski and F. S. W. Zlotkowski were elected members of the Association.

The following resolutions were carried:—

1. "That the Association is of the opinion that the present accommodation for infectious diseases at the Coast Hospital is inadequate."
2. "That a second or reminding notice be sent to all members, such notice to be posted in time to reach members on the morning of the date of the meeting."

The following recommendations to the annual meeting of delegates were approved:—

1. "That the activities of the Branch be extended to include medical agency business."
2. "That some scheme be introduced whereby members of the Branch residing in the country can be represented on the Council."
3. "That the articles of Association be amended so as to permit of the Council delegating some of its functions to Standing Committees."
4. "That arrangements be made whereby sectional meetings of members interested in special branches of medicine can be held."

### NORTHERN SUBURBS' MEDICAL ASSOCIATION.

A meeting of the Northern Suburbs' Medical Association was held on Saturday, 18th July, 1914, at the Town Hall, Hunter's Hill, Sydney, Dr. F. Guy Griffiths, the President, in the chair.

The following medical practitioners were elected members of the Association:—

Drs. Creswell Howle, P. T. Thane, S. V. Appleyard, J. S. Milne.

The following resolutions were carried:—

1. "That the Sydney and Suburban Provident Medical Association be requested to consider the advisableness of arranging that an examination fee of 2s. 6d. shall be payable by all persons seeking admission thereto."
2. "That a notice be sent to the Secretaries of all the Lodges meeting within the area of the Association, advising that members of the B.M.A. cannot accept upon their lists for medical attendance members of the A.N.A., The Phoenix Mutual Provident Society, Limited, and the People's Prudential Benefit Society, Limited."

Other matters on the agenda paper were deferred to a future meeting.

## Medical Matters in Parliaments.

### NEW SOUTH WALES.

On July 28, Dr. Arthur asked the Premier if the Government had come to any decision in regard to the appointment of a Royal Commission on venereal diseases. In

reply Mr. Holman stated that the matter was under consideration. Dr. Arthur further asked the Premier:—(1) Whether it was a fact that large quantities of garbage and offal are being washed up upon the ocean beaches near Sydney; (2) and whether he would take steps to find out where this garbage comes from, and also to put a stop to this pollution of the beaches?

Mr. Holman replied as follows:—(1) I am informed that garbage is sometimes washed on to the ocean beaches near Sydney; generally during easterly winds. (2) Action will be taken with a view to minimising as much as possible the pollution of the beaches referred to.

### Dentists (Amendment) Bill.

The Minister for Health, in moving the second reading of the Dentists Bill, in the Legislative Council, explained its objects in the course of a short speech. Under the present law anyone can practise dentistry. Mr. Flowers recognised the danger to the public of this state of affairs, and considered that qualified and registered dental practitioners should be protected. The Bill makes it illegal for anyone to use any title or description, save those which have been conferred upon him by a duly qualified association. Persons who have, however, practised dentistry for five years are ipso facto eligible for registration. Mr. H. pointed out that some 40 or 50 unregistered dentists were at present practising, although he admitted that his figures might not be quite accurate. The Bill, if passed, would give reasonable safeguards to the public without inflicting unnecessary hardship on anyone. Mr. F. H. Brown intimated that he wished to introduce an amendment to enable persons who have practised as dentists for a specified time "with credit to themselves and no hurt to the community," to become automatically registered. After a short debate the subject was adjourned until August 5.

### White Phosphorus Matches Prohibition Bill.

After a short debate this Bill was read a second time. One or two minor amendments were introduced. On July 30 this Bill was read in the Assembly for the first time.

On Tuesday, August 4, Mr. Dooley moved:—

- (1) That a Select Committee be appointed to inquire into and report upon the outbreak of smallpox in New South Wales, the system of vaccination adopted, and the best means of treating a future outbreak.

- (3) That such Committee consist of Mr. Cann, Dr. Arthur, Mr. Boston, Mr. Nicholson, Mr. Cusack, Mr. Durack, Mr. Gardiner, and the mover.

The Public Health Amendment Bill and the White Phosphorus Matches Prohibition Bill were dealt with by the Assembly on their second reading.

The Abattoirs Bill reached its Committee stage.

On August 4th Mr. Wade asked the Colonial Secretary (1) Whether the Government had taken any steps to extend the accommodation at the Sydney Hospital for the nurses or patients or for administrative purposes, (2) whether any steps had been taken to secure the removal of the Mint to a site elsewhere, (3) whether the Government would make available part of the Mint area for the extension of the Sydney Hospital, and (4) whether representations had been made as to the urgency of additional accommodation for nurses, patients and administrative purposes?

The reply of the Colonial Secretary was as follows: (1) The matter is now before the Parliamentary Standing Committee on Public Works. (2) Vide No. 3. (3) This may be a matter for consideration in connection with No. 1. (4) Yes.

In reply to Mr. Wade the Prime Minister stated that serious consideration was being given to the proposal that a motor ambulance should be provided for the convenience of patients in the Royal North Shore Hospital.

### NEW ZEALAND.

On the 29th July, Mr. Wilford moved the second reading of the Factories' Act Amendment Bill. The Bill aims at the improvement of conditions of labour in the woollen factories, chiefly affecting women and children. The working hours for women and children are reduced to 45 per week, and the general hygienic condition of the factories will be placed in a more satisfactory condition. The Bill received favourable consideration.



## VICTORIA.

The Legislative Assembly of Victoria considered, on the 28th and 30th July, the Hospital and Charities Bill in Committee. No progress, however, has been made with this Bill.

In the debate on the second reading of the Sewerage Districts Bill the Minister of Water Supply pointed out that the sewerage systems in Melbourne and Geelong were the only ones in the State. The Bill would enable a municipality, who desired it, to constitute a sewerage trust after petitioning the Governor in Council. He described the method of procedure to be adopted in the formation of trusts, and pointed out that while the Bill was merely permitted several municipalities, e.g., Ballarat, Bendigo, and Kyabram, had already developed schemes for the disposal of sewerage, and were awaiting the passage of the Bill to put these schemes into operation. The debate was adjourned until 4th August.

## SOUTH AUSTRALIA.

On July 30, Mr. Green asked whether any outbreak of diphtheria at the Thebarton School had been reported, and if so what steps had been taken in regard to it.

The Premier replied that he had received a report from the Medical Inspector of Schools (Dr. Gertrude Halley), showing that cases of diphtheria had occurred in the junior and first classes, and the schoolrooms in question had been closed for several days for thorough disinfection. He had made inquiries concerning Richmond School, but had found no cases reported from there this year.

Mr. McDonald inquired whether it was intended at an early date to have an assistant medical officer for the Education Department.

The Premier said he had given instructions to that effect a fortnight ago, and believed that applications for the position were being advertised for.

## WESTERN AUSTRALIA.

On the motion of Mr. B. J. Stubbs, it was resolved,—That a return be laid upon the table of the House showing (1) the situations and areas of the various parcels of land granted to the University Endowment Trustees under section 4 of the University Endowment Act, 1904; (2) the areas of such lands that have been leased under section 7 of the University Endowment Act, 1904, or section 15 of the University Act, 1911, the period of time and the purpose for which such lands have been leased, and the amount of revenue which the trustees or the Senate have derived from such leases.

A Bill for the proper registration of Births, Deaths, and Marriages was introduced into the Western Australian Legislative Assembly on July 28.

The Births, Deaths and Marriages' Act Amendment Bill has passed the second reading in the Legislative Council of the Western Australian Parliament, and has been introduced into the Assembly. The chief features of the Act are the delegation of power to appoint and remove district registrars to the Registrar-General, which would effect a more constant service; the extension of time, during which the registration of the name given to the child may be effected, to 60 days; and the removal of certain anomalies in connection with birth registration, as well as a slight modification of the regulations governing the registration of deaths.

## Public Health.

## INSANITY IN SOUTH AUSTRALIA.

The annual report of the Lunacy Board of South Australia for 1913 deals with the Parkside Mental Hospital exclusively. During the year, 168 private, 826 pauper and 88 criminal and dangerous patients were admitted. Two hundred and seventy-two persons were discharged or died. The ratio of lunatics, idiots and persons of unsound mind to the general population shows a tendency to become lower. The ratio of admissions to every 10,000 of population was 6.18 in 1913, as compared with 5.24 in 1912. One hundred and fifty-six patients were discharged during the year, as compared with 103 during 1912. The manic-depressive, the delusional and the toxic and confusional

forms of insanity contributed most largely to the discharges. No epidemic of disease of any kind occurred during the year, and the majority of the deaths were due to heart disease, diarrhoea and senile decay. The total expenditure for the year 1913 was £36,407/18/4, as compared with £37,325/11/11 in 1912. The daily average cost of each patient was 1/2½, and the daily average cost of each patient after deducting fees paid for maintenance was 1/5½. Great importance is attached to the provision for amusement for the patients. In addition to dances and a garden party, six picture shows were held during the year.

## SMALL-POX IN SYDNEY.

The number of small-pox cases reported to the Department of Public Health, New South Wales, during the week ended 2nd August, 1914, were:—

	Cases.
Metropolitan District.. .. .	19
Moree .. .. .	3
Quirindi .. .. .	13
Rooty Hill .. .. .	1

Total.. .. . 36

The number of small-pox cases reported to the Department of Public Health, New South Wales, during the week ended 9th August, 1914, were:—

	Cases.
Metropolitan District.. .. .	14
Country Districts.. .. .	1

Thirteen cases of small-pox have been reported in Quirindi, 2 or 3 of which are stated to be bad cases. Dr. A. A. Chapple is investigating the outbreak, and a depot has been opened for the vaccination of the town folk.

## NIGHT CLINICS.

A night clinic has been opened at the Board of Health offices, Macquarie Street, Sydney. The clinic will be available on Thursday for women, and on Mondays for men. There is no indication whether the Minister of Public Health proposes to extend these arrangements in the immediate future.

## INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ended August 1, 1914:—

Notifiable Disease.	Number of Cases.
Typhoid Fever .. .. .	4
Diphtheria .. .. .	57
Varicella .. .. .	12
Phthisis .. .. .	6
Erysipelas .. .. .	4
Scarlet Fever .. .. .	5
Ankylostomiasis .. .. .	1
Puerperal Fever .. .. .	2

Total number of cases .. .. . 91

## Vital Statistics.

## HOBART AND LAUNCESTON.

The Government Statistician's report for June, 1914, includes the following information. The birth-rate for Hobart was 2.45 per 1,000 of population, and for Launceston, 2.83. The death-rate was 1.23 for Hobart, and 1.42 for Launceston. 21.43 per cent. of the deaths affected persons under 5 years of age, and 44.95 per cent. persons over 65 years of age. There were no deaths due to either typhoid or diphtheria. The chief causes of death were senility, diseases of the respiratory system, diseases of the digestive system, general diseases, diseases of the nervous system and diseases of the genito-urinary system, and diseases of early infancy.

The vital statistics for the country districts of Tasmania, during the month of June, 1914, show a birth-rate of 2.25 per 1,000 of population, and a death-rate of 0.61. The chief causes of death were pulmonary consumption, and other forms of tuberculosis, cancer, diphtheria and general diseases.

## THE HEALTH OF NEW ZEALAND.

During the month of July, 1914, 271 births have been registered in Auckland, as compared with 270 during the corresponding month of 1913. The number of deaths in the month was 117, bringing the total for the seven months of 1914 to 777, which is 38 less than the numbers for the corresponding period of 1913.

## Hospitals.

## HOSPITAL FOR SICK CHILDREN, BRISBANE.

The annual report of the Committee of the Hospital for Sick Children, Brisbane, was presented to the thirty-seventh annual meeting, on the 24th July. Sympathetic reference was made to the deaths of Mrs. Cowlshaw, who had been a member of the committee for 24 years, and had acted as president to the hospital, and also of the Honourable Alexander Raff.

The number of in-patients treated in the hospital during the year was 2036; 1907 new patients having been admitted. In the out-patient department 13,320 attendances had been given, the number of new out-patients for the half-year being 2420; 251 cases of diphtheria, as compared with 360 cases last year, were treated in the hospital. The death-rate of all cases was 9 per cent. In the Infants' Ward, 158 cases of gastro-enteritis were treated, with 68 deaths; 44 cases of typhoid were dealt with, including 3 cases of perforation, 1 of which recovered after operation; 122 patients were sent to the Lady Musgrave Sanatorium. The report states that: As in past years the Hon. Medical Staff continue to ungrudgingly devote their time and skill to the little sufferers. The Committee proffer their sincere thanks to these gentlemen. Dr. H. T. Mathewson has been appointed Hon. Out-patient Physician. Dr. Mackenzie and Dr. Morlet have succeeded Dr. Elizabeth Sweet and Dr. Selwood as Resident Medical Officers.

In the financial statement the chief items of income are shown to be £2293 15s. 6d. from subscriptions, £876 from boxes, Hospital Saturday, and Henley-on-Brisbane, £6929 18s. 6d. from Government endowments, and £848 10s. from legacies.

## PARRAMATTA DISTRICT HOSPITAL.

The Minister of Public Health for New South Wales, after visiting the Parramatta District Hospital on July 23, stated that the Government would make a grant of £100,000 for the erection of additions to the hospital, including suitable quarters for the resident staff. He proposed to lay down the sum of £20,000, and to hand over the balance at the expiration of three years, either in one or in several instalments. It is hoped that the hospital, when completed will be a credit to those concerned.

## LAUNCESTON HOSPITAL.

During the month of June 263 patients have been treated in the wards of the Launceston Hospital; 67 patients had been discharged, and 2 had died; 118 new patients had been treated in the out-patient department, where 663 attendances had been made during the month.

## INFECTIOUS DISEASES HOSPITAL.

Dr. F. Scholes, Superintendent of the Infectious Diseases Hospital, Melbourne, reported that several children who were diphtheria "carriers" had been sent to the hospital. This practice was detrimental both to the child and to the hospital. He suggested that accommodation, either connected with or separate from the hospital should be provided. Councillor Beachcroft (Richmond) suggested that the committee approach the Government with a view to having a special institution built to deal with the "carriers."

## THE MAREEBA DISTRICT HOSPITAL.

We are informed that the Council of the Queensland Branch has decided to remove its objection to medical men accepting the post of medical officer of the Mareeba District Hospital, provided that the information supplied by the hospital authorities proves to be substantially correct. The medical officer is not required to attend patients in their own homes, and while some arrangements have been made

for such attendances, it is distinctly understood that if the medical officer carries out this attendance, he will receive any fees which may be forthcoming. In the case of members of the Meat Export Company, a contract subscription of 9d. per week for married men and their wives and of 6d. for unmarried men has been arranged. The same scale of contributions applies to the employees of the Mount Mulligan Coal Mine.

## University Intelligence.

## UNIVERSITY COLLEGE AT AUCKLAND.

The long-delayed selection of a site for the new University College buildings in Auckland appears to be approaching settlement. Mr. A. M. Myers dealt with the matter very forcibly on July 23, in the House of Representatives. He advocated the acquisition of the Metropolitan Grounds site. Mr. Reed opposed this, and suggested that a site at St. John's, beyond Remuera, should be acquired. The Prime Minister was opposed to utilizing any portion of the Metropolitan Grounds for such a purpose, and Mr. Oliver held him to that pledge. At the end of a long debate, in the course of which several other sites were suggested, the Prime Minister promised that he would settle the matter with the assistance of Mr. Myers on the occasion of his next visit to Auckland.

## MELBOURNE UNIVERSITY.

The new University Appointments Board having received the sanction of the Governor of Victoria, may now be regarded as an accomplished fact. The object of the Board is to provide facilities to professional and commercial employers, who are desirous of obtaining the services of University graduates. It will be appointed to the Council, and will consist of ten or more representatives of the teaching, engineering, chemical, metallurgical, agricultural, veterinary and other branches of University education, as well as representatives of the correspondence, commercial, or professional undertakings.

## Medical News.

Dr. W. T. Hayward, Chairman of the Federal Committee of the Australian Branches of the British Medical Association, has been elected a Vice-President of the Association at the annual meeting at Aberdeen. Such an honour has not previously been conferred on an Australian medical practitioner. We beg to offer Dr. Hayward our heartiest congratulations.

Some of the witnesses giving evidence on July 28th, 1914, before the Royal Commission on the housing conditions of the people of Melbourne, revealed a very dangerous state of affairs in the poorer quarters of the city. Dr. C. Page thought that the crowded condition of some of the large tenement buildings had given rise to the spreading of infection of tuberculosis. He admitted that improved drainage had checked this spread. He found that there was much overcrowding in small cottages, which was conducive to the spread of the disease. He advocated the creation of a Government Nominee Board, with power to spend money on the improvement of housing conditions. Officers of the Salvation Army spoke of the bad conditions in Carlton, Collingwood and Little Bourke-street. Many of the people could not pay more than 5/- or 6/-, a week for a dwelling, with the result that several families clubbed together to occupy a house which could not accommodate more than one family satisfactorily. The Matron of the District Nursing Home stated that many persons came under her notice, having become ill as a result of the insanitary conditions of the homes. The sanitary arrangements, the lighting and the ventilation were extremely defective in many of the houses. Several of the witnesses complained that the houses which were condemned were not pulled down, but were patched up and allowed to be used for human habitation.

Vaccination legislation appears to offer difficulty to the one people who should have no doubts at all about the matter, namely the British people. In view of the fact

that Jenner was an Englishman, and that the whole early history of preventive inoculation for small-pox was limited to the British Isles, it might have been expected that the British Empire would be the best vaccinated section of the world. Added to this, there are the irresistible arguments in favour of the efficacy of vaccination. But in spite of everything, the introduction of the conscientious objection clause in the English Act, and the very various conditions of the law in Australia, indicate that the British Empire is far removed from being in a satisfactory position in this respect. We learn that in Melbourne Port, a difficulty has arisen in the administering of the existing law. On July 28th, a certain number of persons were prosecuted for failing to have their children vaccinated. But the cases had to be adjourned, on account of differences of opinion between the two presiding Justices as to what fine should be imposed. We regret to state that the Mayor (Mr. A. L. Page) advocated a reduction of the usual fine of £1, which we consider quite inadequate, if it is intended to have a deterrent effect.

#### BUSH NURSING IN TASMANIA.

A deputation from the Bush Nursing Association waited on the Premier of Tasmania and the Chief Secretary. The deputation was introduced by Dr. E. Crowther. Dr. S. A. McClintock, the Chief Officer of Health, was also present. Dr. Crowther and Mrs. Edwards asked the Premier to give his attention to the conditions obtaining in certain country districts where the poorer section of the population had difficulty in obtaining medical or nursing assistance. The following propositions were put to the Premier:—

- (1.) "That the Government be asked to subsidize the central council in the Tasmanian Bush Nursing Association, in order that the council might be able to assist the poorer municipalities to pay the salaries of fully qualified bush nurses, the central council to be composed of representatives of the North and the South councils of the Tasmanian Bush Nursing Association."
- (2.) "That the Government be asked to grant free railway passes to nurses, and to such organizers as the Association may find it necessary to send into the country districts."
- (3.) "That their travelling expenses be guaranteed to nurses when going to take up work in a municipality."
- (4.) "That the services of the bush nurses be availed of to assist in the medical inspection of school children in the various municipalities."

It appears that in five municipalities in Tasmania, no doctor is available, while in at least 39 out of the 49 Tasmanian municipalities a bush nurse is required. After the arguments had been strongly supported by several members of the deputation, the Premier stated that he felt sure that the Minister of Railways would grant free passes to nurses and organizers. In regard to the question of a subsidy from the Government, all he could promise was to have the matter discussed by the Cabinet. It was in the power of the Cabinet to accede to the wishes expressed, but all these things involved a considerable expenditure. He spoke sympathetically on the subject of the establishment of maternity hospitals, and congratulated the deputation on the determination displayed in connection with the welfare of the community.

### Special Correspondence.

(From our Special Correspondent.)

LONDON.

#### The Croonian Lecture.

The Croonian Lecture for the year was delivered on June 11th, before the Royal Society, by Professor E. B. Wilson, who chose for his subject, "The Bearing of Cytological Research on Heredity."

At the opening of his lecture, Professor Wilson drew attention to the passage in which Huxley argued that it was probable that every part of the adult contained molecules derived from both the male and the female parent,

and that, regarded as a mass of molecules, the entire organism might be compared to a web of which the warp was derived from the female and the woof from the male, while each of these might constitute an individuality in the same sense as the whole organism was an individual, although the matter of the organism had been constantly changing. "The drift of latter-day research," said the orator, "while it had not precisely confirmed Huxley's conception, had nevertheless been quite in harmony with the essential thought to which he gave such picturesque expression at a time when the labours of cytology were but just begun. Huxley's thought had been most nearly realized through the study of the cell-nucleus, and more particularly of the bodies in it known as the chromosomes. These were not the only elements concerned in heredity, but they offered the most available point of attack, and had in fact yielded the most definite results. It was a significant fact that in cell-division the nucleus did not divide en masse, but by the formation of a definite number of rod-like chromosomes, which divided by being cleft longitudinally. In the fertilisation of the eggs similar groups of chromosomes were contributed by the egg-cell and the sperm-cell; by a continued process of division the descendants of the original chromosomes were equally distributed to all the nuclei of the body, a fact that had been conclusively proved by the study of hybrids. Hence followed the far-reaching conclusion that the nuclei of the body-cells were diploid or duplex structures, descended equally from the original maternal and paternal chromosome groups of the fertilised egg. This was the central result of cytology, about which all the more specific discoveries relating to the chromosomes naturally grouped themselves.

When the Mendelian phenomena became known in 1900 it at once became evident that in broad outline they formed a counterpart to those which cytology had already made known in respect of the chromosomes. Characters and chromosomes alike were contributed to the offspring in corresponding groups by the two parents. They were alike singly represented in the germ cells, and doubly represented in the body cells, and both were again reduced to the single condition in the formation of the new germ cells. Cytology had continually accumulated evidence to show that the process was effected by a pairing of the association of the chromosomes, two by two, and their subsequent separation or disjunction in the so-called reduction-division. If it was assumed that the pairs of Mendelian units were dependent upon corresponding pairs of chromosomes a very simple quasi-mechanical explanation of Mendel's fundamental law of segregation was reached."

He pointed out that hereditary units tended to hold together in groups, and that each chromosome was, in some way, the bearer of many such units.

In conclusion, he said that "to those in intimate touch with cytology and genetic research, the conclusion had become irresistible that the chromosomes were the bearers of the 'factors' or 'genes,' with the investigation of which genetics was now so largely occupied. It was not known, however, what a 'gene' was, or how it operated. All that was known was that it was something necessary to the development of a particular character. It might be guessed that the 'gene' played its part by its specific chemical nature, and unquestionably the study of chemical physiology as applied to development was destined to play an increasingly important rôle in the future study of the problem. Meantime, it would be well to drop the term 'determiner' or 'determining factor' from the vocabulary of cytology and genetics. What was really meant was 'differential' or 'differential factor,' and in speaking of nuclei or chromosomes as the bearers of heredity one was only employing a figure of speech. Conceptions of cell-organization, like those of development and heredity, were still in the making, and could not yet be given very definite outlines. In some respects, however, the latest advances in this field of inquiry fell into line with some of the early theoretical conclusions of Roux, Weismann, and De Vries, who first endeavoured to bring cytology and the experimental study of heredity into organic relation."



### The Cavendish Lecture.

The Cavendish Lecture was delivered by Dr. F. W. Mott, F.R.S., before the West London Medico-Chirurgical Society, on June 19th. The lecturer chose as his subject "The Causes of Insanity," and in the course of his address pointed out that the steady increase of insanity was a matter of deep concern to the future of the race. Last year in London alone the total cost of maintenance of London pauper lunatics under the control of the London County Council amounted to over three-quarters of a million pounds. This did not include the cost incurred by the Metropolitan Asylums Board for the housing and maintenance of imbeciles, idiots, and incurable cases of insanity, while there would presently be a fresh charge for the life segregation of mental defectives, a very necessary procedure, which from the ratepaying, as well as from the eugenic point of view, would well repay the outlay. Raising the question as to whether the money spent on dealing with the problem might not have been more advantageously spent on brains instead of bricks, Dr. Mott insisted that the essential was to educate the public conscience to the value of scientific research. There was no hope of preventing or curing insanity or feeble-mindedness until one knew the causes underlying the diseases of the mind and mental deficiency. The history of the progress of medical science demonstrated the fact that the application of the biological, physical, and chemical sciences to the study of the causes of disease had led to discoveries resulting in prevention and successful treatment. Referring to feeble-mindedness, Dr. Mott insisted that mentally-defective children, particularly if more than one occurred in a family, were usually the offspring of parents who were imbecile or of low grade mentality. Although mental deficiency was not limited to any social grade, yet as a rule it was in the sediment of the large overcrowded cities and the rural districts that feeble-mindedness was most to be found. Among the lower inefficient grades of society there would always be a tendency for people of feeble intelligence, weak will-power, slender capacity, and deficient moral sense to mate and breed. The social environment was necessarily bad and unhygienic; consequently they were very prone to be affected by the race poisons, syphilis, alcohol, and tuberculosis, which tended to an increase of the bodily and mental deficiency in the next generation. In this way it was possible that these race poisons might tend to weed out poor types, but it was also probable that they tended to produce poor types. It might be a biological heresy, but it was firmly rooted in the minds of practising physicians that a chronic saturation of the blood by the race poisons, especially when operating in successive generations, could per se cause degeneracy in healthy stocks by a pathological mutation of the germ plasma.

In conclusion, Dr. Mott expressed the opinion that true mental disorders, where no morphological changes could be found, could be conveniently divided into two great etiological groups—the toxic and the degenerative. Although alcohol played an important part in the degeneracy of a stock, yet as to its being the sole cause, or even the principal cause, of a large proportion of admissions to asylums, he was very sceptical. Every practitioner knew of individuals born of sound stocks that none of the acquired conditions usually assumed to be the cause of insanity could render permanently insane, such as head injury, exhaustion from worry and overwork, emotional shocks, alcoholism, and microbic infection. Delirium might be the result of many such conditions, and this might persist for some time until the cause was removed, and the patient recovered sooner or later his normal mentality. Should, however, there be a neuropathic inheritance any of these causes, single or combined, might lead to a temporary or even permanent derangement.

### The Action of Lipase.

In a paper read before the Royal Society on April 30th, on "Studies in Enzyme Action," Professor Armstrong described some interesting results obtained experimentally with the fat-splitting enzyme, lipase. Under the influence of this substance not only was fat changed into acid and glycerol, but the reverse change also occurred. He described the quantitative results obtained, showing the con-

ditions under which the change went in one or the other direction. With a slight increase in the amount of water present the percentage quantity of fat formed was considerably reduced from its maximum of forty, water apparently having the effect of taking the glycerol out of action. By increasing the amount of glycerol present the quantity of fat produced was increased to about 50 per cent. A certain amount of water seemed necessary for the reaction to take place. In conclusion, he indicated the importance of these results in their bearing on physiology. How was it possible, he asked, to reconcile them with the physiological view that the conversion of fatty acid into fat was total? There was need for a complete study of fat formation and utilization in the animal organism.

### Plant Sensations.

At a lecture recently delivered at the Royal Institution by Professor Chunder Rose, some very interesting and suggestive facts were brought forward bearing upon some of the sensory phenomena met with in plant life. It was pointed out that plants responded either by electrical or mechanical movements to blows inflicted upon them. Taking the mimosa, for example, there was found at the joint of the leaf, a cushion-like mass of tissue, which under excitation contracted and caused the leaf to fall down. Professor Rose described the delicate apparatus known as the resonant recorder, which he had invented for registering the response made by plants to excitation. Comparing the sensitiveness of mankind and plant, he said the average European would perceive by his tongue an electric current as feeble as six microampères. The plant biophytum was eight times more sensitive to an electrical current than a human being. As to sleep, the mimosa was found to keep late hours, to fall asleep only in the small hours of the morning, and to get up late, gradually waking up by noon and remaining in a condition of uniform sensibility all the afternoon. With the passing of a cloud the response of the plant diminished. The cloud gone, the response became normal. It was supposed that plants flourished in carbonic acid gas. His records showed that under the gas the plant suffocated, and that a breath of fresh air brought a whiff of relief. All plants alike were sensitive. Even the carrot was very excitable. If over-excited it would lose its head and give perverse responses. The "latent period" of a mimosa—that is, the time-interval between the application of and response to excitation—was about a nine-hundredth part of a second, or about six times as sluggish as the latent period of a frog. After the application of cold the conducting power of a plant would become paralysed, but could be restored quickly by submitting the paralysed portion to a moderate electric shock. There was an extraordinary parallelism between the effects of poisons on the beat of the human heart and the pulsations of the Indian plant desmodium, those poisons which assisted the beat of the heart by contraction or expansion affecting the plant-pulsation in a corresponding way. As in man, so in the plant at the supreme crisis of death, a great contractile spasm took place throughout the organism.

### Graduation Day at the University of London.

The annual ceremony of the Presentation for Degrees at the University of London took place in the Great Hall of the University on May 13th. Dr. Herringham, the Vice-Chancellor, presided, and there was a large attendance of distinguished graduates of the University and of the general public.

In presenting his annual report for 1913-14, the Principal announced that the total admissions by all channels amounted to 3,852, as compared with 4,047 in 1912-13. Of these, 2,978 came in through the ordinary matriculation examination, 153 as graduates of other universities, 578 as holders of Oxford or Cambridge senior local certificates, 96 as holders of other approved certificates, and 47 after examination under Statute 116. The total number of candidates for all examinations was 11,920, as against 12,455 last year. He pointed out that the falling-off in the number of examinees—most marked in the case of matriculation—was found entirely among the entries from the provinces (those from London itself having increased), and was probably attributable to the growing success of the younger

universities. Of the total of 1,807 candidates for degrees, 900 were internal and 907 external. Last year, of 1,989 such candidates, 983 were internal and 1,006 external. The total number of successful candidates at all examinations was 6,343, and the number of those who obtained degrees and diplomas 1,301. The total number of internal students is now 4,888, as against 4,664 this time last year.

After the Public Orator, Professor E. A. Gardner, had delivered the Latin Oration, cadets of the Officers Training Corps, who had obtained "B" Certificates or had proceeded to Commissions in the Army, and students who had obtained diplomas in the Humanities, were presented to the Vice-Chancellor, followed by undergraduates who had won scholarships and exhibitions, and last of all came the Bachelors, Masters, and Doctors.

An address on University Reform was afterwards delivered by Sir Philip Magnus, Parliamentary Member for the University.

In the evening, a service for members of the University was held at Westminster Abbey, the sermon being preached by the Bishop of London.

#### Sanatorium Benefit Under the Act.

A return on the administration of the Sanatorium Benefit, under the National Insurance Acts from July 15, 1912, to January, 1914, was issued on May 1st as a White Paper. The total number of applications for sanatorium benefit and of insured persons and dependents of insured persons receiving sanatorium benefit during this period was: Males, 33,977; and females, 18,088; total, 52,065. In England, Scotland, and Wales, both in the number of applications and the number of persons treated, males were twice as numerous as females. In Ireland males also predominated, but were much more nearly balanced. Of a total of 58,756 cases of tuberculosis, 26,302 received residential treatment, 10,243 dispensary treatment, and 22,211 domiciliary treatment. On January 11, 5931 persons remained under residential treatment, and 5738 under dispensary treatment. The approximate expenditure of Insurance Committees from July 15, 1912, to January 11, 1914, on the provision of Sanatorium Benefit, including payments to practitioners in respect of domiciliary treatment, but excluding the cost of administration, was: England, £651,000; Scotland, £103,200; Ireland, £31,700; Wales, £50,000.

### Correspondence.

#### THE MEDICAL CONGRESS AND THE B.M.A.

Sir,—I have read the letters of Dr. A. Jefferis Turner and "Country Member," in your last numbers, and to me it is evident that Dr. Turner has not suffered the loss of the greater part of his income because some members of the medical profession are despicable enough to take advantage of the present demand by the B.M.A. for increased contract rates. Had Dr. Turner suffered as I and many others have, perhaps his brotherly love for "blacklegs" would not be so keen. It is easy for any doctor who does not earn his bread by contract practice to say, "Let the galled jade wince, my withers are unwrung."

Sir Walter Scott has written some lines which I think are very applicable to these contemptible individuals.

The Stanza commences:

"Breathes there a man with soul so dead,  
and ends—

The wretch concentrated all in self,  
Living shall forfeit fair renown,  
And doubly dying shall go down,  
To the dust from which he sprang,  
Unwept, unhonoured, and unsung."

The going down to their "vile dust" is a consummation to be devoutly wished. In my opinion "blacklegs" should be regarded by members of the B.M.A. as traitors to their class, and should be treated as traitors are in times of war in any country, i.e., given no quarter. I suppose Dr. Turner will say I have not a "redeeming feature," and that

I am lost to all sense of shame because I sign my name. Well I am not ashamed of it, or of the views I hold.—Yours, etc.

West Wallsend,

August 4, 1914.

J. WALLACE WATSON.

Sir,—Re the Medical Congress and the B.M.A., which I wrote as "Country Member" I did not think my views so singular, or a sign of a new brand of medical ethics. Anyhow I am in nowise ashamed of them. And perhaps your correspondents, Dr. Sirois and Dr. Turner (A.M.J., 1st August, 1914) would not regard my opinions as so extreme were they cognisant, as I have been, of cases of distress caused by the intrusion of outsiders where men were making sacrifices to be loyal to their Association, and to live up to the accepted ethical standards.

I would point out that in my previous letter (A.M.J., 18th July, 1914), I did not infer that every man outside the B.M.A. was a pariah. What I did say was that the very few reputable men who were not members were not worth considering. And I still hold this view despite Dr. Sirois' extraordinary statement that "jealous neighbours" and "conceited members of Council" have at times prevented eligible candidates being admitted to the Association. It may be a fact, but a good many will think that Dr. Sirois' indignation and imagination became mixed up. Also let me state that I am not so bigoted as to regard every one on the confidential list as equally culpable. There is some excuse for the man who has been holding a position which the Association decides should not be held on the ground that it is against the interests of the profession. He may hesitate to relinquish it fearing the loss of his means of support. If he retains it he certainly offends against the profession as whole, but no individual is a direct sufferer by his act.

But for the intruder, who, without scruple or conscience, cuts in against the man fighting for principle and loyal to his fellows, there should be no toleration. The action of this class is a deliberate one, and they must know that they are every time inflicting great hardship on a brother practitioner, sometimes even compassing his ruin. These interlopers should be made realise that by their conduct they are cutting themselves off from intercourse of every kind and under every circumstance with their fellows.

And if the expectation of this means the introduction of a new brand of medical ethics I fail to see wherein the new brand differs so much from the old. I take it that Dr. Turner would refuse to consult with one of these men. That refusal might mean the death of an innocent child. Yet if this man who had no scruples in crushing a more principled colleague, becomes ill, Dr. Turner considers he must attend him, instead of leaving him to the care of those of his own kind. To refuse in one case is "ethics," in the other case it would be "quasi-murder." If so, I think it is time we had a new brand of ethics.—I am, etc.,

Mungindi,

5th August, 1914.

E. B. FITZPATRICK,

Country Member, B.M.A.

#### THE MEDICAL PROFESSION AND THE WAR.

Sir,—I have no doubt that every member of the medical profession throughout the land is anxiously asking himself "What can I do to assist my country and the Empire in this terrible outbreak of war in which we are involved?"

I would like to make a proposal which I think will be of great service to the country, and will put it within the power of a great many medical practitioners to co-operate for the general good as this crisis, and will also be in keeping with the humane and self-sacrificing spirit which always and everywhere has characterised the medical profession. My proposal has also the merit of having been carried out with great success in England during the Boer war, and notably in Bradford, where I resided then.

My proposal is that the medical practitioners undertake to give their professional attendance free of charge to the families and dependants of those who are called away to fight for the defence of our country and ourselves.

I venture to hope, sir, that this suggestion will meet with your valuable approval and co-operation, and that it will commend itself to your readers.

I must leave it to others who are known and have

influence with the profession to take the necessary steps to call a meeting and submit the proposal for approval. Any help I can give will be most willingly given.

I may add that this movement of the medical profession in Bradford during the Boer war was received by the public with the warmest approval and enthusiasm. "Bis dat qui cito dat" is eminently true in such a movement.

Yours faithfully,

THOS. WHITESIDE HIME (B.A., M.D., etc.).  
Sydney, August 10, 1914.

## Replies to Correspondents.

Dr. J. W. Barrett:—Numbers 1 to 8 of the series of articles, entitled "Romance of Medicine," by Dr. J. W. B. Bean, have appeared in the Australasian Medical Gazette, on the following dates:—

- No. I., Vol. XXXI.—February 10, 1912, page 128.
- No. II., Vol. XXXI.—March 23, 1912, page 300.
- No. III., Vol. XXXI.—May 25, 1912, page 541.
- No. IV., Vol. XXXII.—November 16, 1912, page 505.
- No. V., Vol. XXXIV.—August 23, 1913, page 169.
- No. VI., Vol. XXXV.—February 7, 1914, page 100.
- No. VII., Vol. XXXV.—March 14, 1914, page 222.
- No. VII., Vol. XXXV.—April 18, 1914, page 335.

This series is being continued in the Medical Journal of Australia, No. 9, having appeared on July 29, pages 88 to 90.

## OPTICIANS IN QUEENSLAND.

The following letter appeared in the Brisbane "Courier" of July 27, 1914.—

### "A Note to Oculists."

Mr. Sydney B. J. Skertchly (President Examining Board Institute of Ophthalmic Opticians, Queensland) writes:—Sir,—Under the above heading, Mr. A. Cambridge, in your issue of Friday, seems to use some remarks of mine as a bellows to blow up the dying embers of a controversy I had hoped was cold in death. I certainly shall not, unless under compulsion, follow suit. What I suppose Mr. Chambers referred to was a remark of mine during an extraordinary address to our Institute of Ophthalmic Opticians, that though we were pleased to know long delayed legislation was at last to come before our Parliament, I was sorry that Queensland had lost the prestige of being the first in the field. That honour belongs to Tasmania, who borrowed our Bill to put it on their Statute book. We shall follow suit.

Several attempts have been made in the past to introduce legislation for the registration of opticians. These attempts have failed and there is, we are informed on good authority, no likelihood that a Bill will be introduced into the Queensland legislative chambers. In a letter to the same journal, signed by Mr. A. Cambridge, and dated July 8th, the suggestion is made that before any steps are taken to introduce any Bill, the opticians should confer with the Queensland Branch of the British Medical Association, with a view of determining what is in the best interests of the public. The Branch would doubtless be prepared to meet the opticians and discuss the matter frankly and fully.

## Personal.

We regret the necessity of having to record that, on the 5th of August, Sir Normond MacLaurin, Chancellor of the University of Sydney, underwent an operation at a private hospital in Darlinghurst. Sir Normond's health had been causing his friends some anxiety for some little time past. We learn, on going to press, that he has made a satisfactory recovery from the operation, and is improving rapidly.

Dr. Andrew has resumed practice at his rooms, 236 St. George's Terrace, Perth, Western Australia.

Dr. D. J. McGavin, of Wellington, New Zealand, arrived in Auckland on the 28th July, after a holiday visit to England, the Continent and America.

Dr. Elizabeth Gunn, medical inspector under the Education Department, arrived in Auckland from Wellington, New Zealand, on the 28th July. She is staying at Glenalvon.

Dr. Cudmore, of Adelaide, returned by the R.M.S. Malwa on August 1 from a trip to Europe.

The resignation of Dr. P. B. Bennie as honorary attending medical officer to in-patients at the Children's Hospital, Melbourne, was received with regret at the last meeting of the committee of the above Hospital.

Dr. Burton Bradley, demonstrator of physiology at the Sydney University, and for several years Assistant Government Bacteriologist in Sydney, is about to undertake private bacteriological and other routine laboratory work at 225 Macquarie Street, Sydney. Dr. Bradley will not engage in private practice, but will devote the whole of his spare time to his new laboratory duties.

Dr. L. G. Muirhead, of Adelaide, has removed to Woodville, South Australia.

We regret to announce the death of Dr. Archibald A. Hamilton, of Angas Street, Adelaide. For some time prior to his death he had been in ill health, and had to relinquish full practice about a year ago. In 1901-2 Dr. Hamilton was president of the South Australian Branch of the British Medical Association. Other offices held by him were those of physician at the Adelaide Hospital, Lecturer to the Australian Nurses' Association and the St. John's Ambulance Association, medical tutor at the University, and for years principal examiner for the A.M.P. Association.

The following have been elected members of the New South Wales Branch of the British Medical Association:—

- Dr. John Allan, Narrandera.
- Dr. C. S. Molesworth, Chatswood.
- Dr. F. J. Jensen, Seymour, Victoria.
- Dr. Wolfe S. Brown, Drummoine.

The following have been nominated for membership:—

- Dr. Garnet E. Manning, Hurstville.
- Dr. I. McW. Bourke, Coonamble.
- Dr. Emma A. Buckley, Royal Prince Alfred Hospital.
- Dr. Francis J. Fahy, Waratah.
- Dr. W. Holland Kaye, Mosman.
- Dr. John Malcolm, Royal Prince Alfred Hospital.
- Dr. John Oswald, Stockinbingal.

Dr. M. Veech has removed from City Road to Macquarie Street, Sydney.

Dr. E. M. Humphrey has removed to Macquarie Street, Sydney.

Dr. Walker Fox, of Christchurch, N.Z., arrived in Auckland from the South on the 4th July.

Dr. A. G. Talbot has commenced practice at the A.M.P. Buildings, corner of Queen and Victoria Streets, Auckland, N.Z.

Dr. Derrick, of Thames, arrived in Auckland on July 10th, and is staying at the Central Hotel.

Dr. J. S. Farris, of Brighton, S.A., has tendered his resignation as Medical Superintendent of the Minda Home, at Brighton. He intends leaving for London, via China and Japan, on July 25.

Dr. George Horne, of Clifton Hill, Victoria, arrived in London from Egypt, Italy and Switzerland in May. He is to go to Norway shortly, and later will tour Scotland by motor, returning to Australia by the R.M.S. Mongolia.

Dr. Allan B. McCutcheon, who has, for the past two years, been resident medical officer of the Auckland Hospital, has returned to Victoria and purposes practising in Melbourne.

## Proceedings of Australasian Medical Boards.

### SOUTH AUSTRALIA.

The following person has been registered under the provisions of the "Medical Act of 1867," as a duly qualified medical practitioner:—

Wilkinson, Jeffery Wilmott, M.B., B.S. (Melb.), 1914.



## Medical Appointments.

Dr. J. E. Piper has been appointed honorary pathologist to the Geelong Hospital, Victoria.

The following has been re-elected honorary medical officers to the Mildura Hospital Victoria: Dr. H. H. McWilliams, Dr. F. J. Jude and Dr. W. J. Cameron.

The undermentioned have been elected honorary medical officers of the Talbot Hospital, Victoria:—

Dr. E. W. Deane, Maryborough, Queensland.

Dr. W. Johnson, Avoca, Victoria.

Dr. A. E. B. Forster, Clunes, Victoria.

Dr. C. Carty Salmon, Melbourne, Victoria.

## Medical Appointments Vacant

HONORARY SURGEON, STATE HOSPITAL AND ASYLUM, NEWINGTON.

APPLICATIONS will be received by the Director-General of Public Health of New South Wales up to Saturday, 22nd August, from legally qualified medical practitioners who are willing to act as Honorary Surgeon to the State Hospital and Asylum for Women at Newington.

T. H. NEELY,

Sydney, 5th August, 1914. Secretary.

GLADSTONE HOSPITAL, QUEENSLAND.

APPLICATIONS are hereby invited for the position of Medical Officer to the Gladstone Hospital, Queensland. Salary: £250 per annum, with the right of private practice. Applications to be forwarded, with testimonials, to the Secretary up to 20th August, 1914. Applicants must be registered under the Queensland Medical Board.

J. T. W. BROWN,

Secretary, Gladstone Hospital.

## Books Received.

TEXT-BOOK ON ANATOMY AND PHYSIOLOGY: For Training Schools and other Educational Institutions, by Elizabeth Bundy, M.D. Third Edition revised and enlarged; with glossary and 253 illustrations, 43 of which are in colours. Demy-octavo, 468 pages. Price, 7/6 net. Philadelphia: F. Blakistons, Son and Co., 1012 Walnut-street.

PRACTICAL HORMONE THERAPY: A Manual of Organotherapy for General Practitioners, by Henry R. Harrower, M.D.; with foreword by Prof. Dr. Artur Biedl, Vienna. London: Bailliere, Tindall and Cox. Sydney: Bruck and Thomson. Demy-octavo, 488 pages. Price, 15/- net.

SPECTRUM ANALYSIS APPLIED TO BIOLOGY AND MEDICINE, by the late C. A. MacMunn, M.D.; with a preface by F. W. Gamble. London: Longmans, Green and Co., Paternoster Row. Sydney: Geo. Robertson and Co. Demy-octavo, 112 pages. Price, 5/-.

The following two books have been received from Messrs. Angus and Robertson, of Castlereagh-street, Sydney:—

(1.) DEFENSIVE FERMENTS OF THE ANIMAL ORGANISMS, by Emil Aberhalden. English translation by I. O. Gavronsky, L.R.C.P., M.R.C.S., M.D. (Halle), and W. F. Lancaster, M.A. London: I. Bale, Sons and Danielsson, Ltd. Demy-octavo, 242 pages. Price, 8/6.

(2.) TEXT BOOK OF LOCAL ANAESTHESIA, by Prof. Dr. Georg Hirschel, Heidelberg; with introductory preface by Prof. Dr. Wilms. Translated by R. E. S. Krolin, M.D. (Lond.) London: I. Bale, Sons and Danielsson. Octavo of 180 pages; illustrated. Price, 10/-.

THE ILEO-CAECAL VALVE, by A. H. Rutherford, M.D. (Edin.) Demy-octavo, 63 pages; 2 coloured plates, and 20 illustrations in half tone. London: H. K. Lewis. Price, 6/- net.

DIETETICS ON FOOD IN HEALTH AND DISEASE, by Wm. Tibbles, M.D., L.R.C.P. (Edin.) Demy-octavo, 627 pages. Price, 12/6 net. London: Bailliere, Tindall and Cox. Sydney: Bruck and Thom-

## Diary for the Month.

Aug. 18.—New South Wales Branch, B.M.A.: Council Meeting.

Aug. 19.—Victorian Branch, B.M.A.: Clinical Meeting.

Aug. 20-26.—British Association Meeting, at Sydney.

Aug. 22.—Conference Victorian Branch, B.M.A., with Friendly Societies' Association.

Aug. 25.—New South Wales Branch, B.M.A.: Committee Meetings.

Aug. 25.—Victorian Branch, B.M.A., Eye and Ear Section.

Aug. 26.—Victorian Branch, B.M.A.: Council Meeting.

Aug. 27.—South Australian Branch, B.M.A.: Ordinary Meeting.

Aug. 28.—New South Wales Branch, B.M.A.: Ordinary Meeting.

Aug. 28.—Melbourne Hospital Clinical Society.

Aug. 28-31.—British Association Meeting, at Brisbane.

Sept. 1.—New South Wales Branch B.M.A., Council Meeting.

Sept. 11.—New South Wales Branch B.M.A., Clinical Evening.

Sept. 11.—New South Wales Branch, B.M.A., Last Day for Nominations for Election to Federal Committee of B.M.A. in Australia.

Sept. 15.—New South Wales Branch B.M.A., Council Meeting.

Sept. 22.—Victorian Branch, B.M.A., Eye and Ear Section.

Sept. 25.—New South Wales Branch B.M.A., Election of Members of Federal Committee of B.M.A. in Australia.

Sept. 25.—New South Wales Branch B.M.A., Ordinary Meeting.

Sept. 29.—New South Wales Branch B.M.A., Committee Meeting.

Oct. 1 and 2.—New South Branch, B.M.A., Annual Meeting of the Delegates of the Affiliated Local Associations of Members with the Council.

Oct. 6.—New South Wales Branch, B.M.A., Council Meeting.

Oct. 9.—New South Wales Branch, B.M.A., Clinical Evening.

Oct. 20.—New South Wales Branch, B.M.A., Council Meeting.

Oct. 27.—New South Wales Branch, B.M.A., Committee Meetings.

Oct. 27.—Victorian Branch, B.M.A., Eye and Ear Section.

Oct. 30.—New South Wales Branch, B.M.A., Ordinary Meeting.

## Warning Notices.

Medical Practitioners are requested not to apply for any appointment referred to below without having first communicated with the Honorary Secretary for the Branch of this Association:—

Appointment.	Hon. Secty. of Branch.
Brisbane United Friendly Societies' Institute, Lodges, etc., of the Longreach, Central Queensland, and Warwick Friendly Societies, Darling Downs, Queensland.	Queensland Branch, B.M.A. Building, Adelaide Street, Brisbane.

Swan District Medical Officer.	Western Australian Branch B.M.A., 230 St. George's Terrace, Perth.
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Contract Practice in Western Australia.	Western Australian Branch B.M.A., 230 St. George's Terrace, Perth.
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Goulburn Friendly Societies' Association, at Goulburn, N.S.W. Lodges at Casino, N. S. Wales. The United Friendly Societies' Association of Orange, N.S.W. Friendly Societies' Lodges, Braidwood, New South Wales.	N. S. Wales Branch, B.M.A., 30-34 Elizabeth Street, Sydney.
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The Friendly Societies' Medical Association Incorporated, Adelaide.	S.A. Branch, B.M.A., 3 North Terrace, Adelaide, S.A.
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## EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to the "Medical Journal of Australia" alone, unless the contrary be stated.

All communications should be addressed to "The Editor," "Medical Journal of Australia," B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.